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I.—SOLIPSISM AND RELATED MATTERS

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THE problem of solipsism in various forms has arisen throughout the history of philosophy, but has become specially prominent with the rise of the logical positivist school. It is not difficult to see why this is so. When the question was simply, "Can I prove that other people exist?", no restriction was placed on the method of proof; it could be quite different from that which guaranteed one's own existence. But the interest of the logical positivists is concentrated in meaning rather than existence, and since they claim that the meaning of a proposition lies in the means by which it can be verified (or falsified), it becomes difficult for them to assert that "you" exist in the sense in which "I" exist unless the evidence for "you" is identical in character with the evidence for "I". That it most certainly is not. Hence, if "existence" is the name given to what is established by the evidence for "I", then existence cannot be postulated of "you"; in other words, I alone exist. In view of this menace, it is not surprising that much attention has been given to this question in recent years.

When we examine the discussions of the question, however, and this applies to old as well as recent discussions, we are struck by one remarkable thing. If a philosopher wishes to disprove the claims of realism, say, he brings forward a realist philosopher—it may be Locke—and shows where he has blundered. If the target is subjectivism, then Kant may be invoked. If idealism is to be refuted, then Berkeley is there to take the count. And so on. But when solipsism is to be discountenanced, and it always is, no champion is called upon to represent and defend it; it is always "the solipsist" who is confounded. The disinterested spectator who wishes to be fair to the combatants

is therefore at a loss. He cannot refer to the works of this universal enemy to see what he has to say for himself, for no reference to them is ever given. If he attempts to deduce from the refutation what it is that is being refuted, he finds himself arriving at different doctrines according to the particular hero who undertakes to rid philosophy of this pest. Each deals effectively with his own dragon, but invariably another dragon, bearing the same name, arises to confront the next hero. *Plus c'est la même chose, plus ça change.* Consequently, "the solipsist", anonymous and protean, looks like being immortal.

Now why is it that, throughout the ages, philosophers have repeatedly felt themselves forced to repel an attack that has never been made? I can think of only one explanation, namely, that they are half-conscious of an unresolved difficulty underlying the foundations of their systems of thought. They are convinced of the stability of those foundations, but they feel that they could not justify their conviction if it were assailed by arguments of a kind that, directed against the superstructure, they would have to treat seriously. They feel obliged to deal as fundamentally as possible with the philosophical problem, and they therefore embody their uneasiness in a form of words that enables them to reason it away without impairing the validity of the rest of the system. The form of words chosen is given the name "solipsism," and it varies with the nature of the system whose foundation it threatens. Some philosophers are satisfied if they can exhibit "solipsism" as something clearly absurd, though they are prone tacitly to identify absurdity with that which is strongly repugnant to commonsense rather than with that which is irrational, which is the meaning they would insist on in a more superficial problem. Others admit that "solipsism" cannot be refuted, but claim that they are justified in rejecting it because no one could seriously believe it. In one way or another it is disposed of to the philosopher's satisfaction, and it is rarely, if ever, that one such philosopher challenges the divergent refutation of another, since his desire is simply to get the horrid thing out of the way, and not to protect it from invalid criticism.

Let us try to express the essence of the solipsistic incubus as simply as possible. Every philosopher wishes his system to be rational; that is to say, he wishes to be able to show that we can deduce every statement contained in it from something else until we arrive at some basic facts or propositions that are self-evident. (There are, of course, those who do not aim at being rational, but are completely satisfied with their experiences, whether or not the words in which they express them convey any

intelligible meaning to others. I have the highest respect for such persons, but we do not call them philosophers ; we call them mystics. They have no interest in the solipsistic problem.) Now there are only two kinds of such basic facts or propositions. They must be either statements which the philosopher has voluntarily made, as in an abstract mathematical system for instance, or experiences of the philosopher himself. In Euclid's geometry, the justification for any sentence in the proof of any proposition can be traced back to the definitions, axioms and postulates which are accepted without question ; if not, the " proof " is invalid. In matters of fact, the ultimate evidence is an experience of the philosopher himself. My reason for believing that the atomic weight of oxygen is about 16 may be that I have measured it and so proved it directly by experience. In fact it is not ; it is that I have seen marks on paper which other experiences of a similar kind, together with some of different kinds, lead me to interpret as a statement to this effect, and yet other of my experiences lead me to infer that this interpretation is to be trusted. Indirect as this route is, it ends always in my experience, which I cannot question. And what is true of the atomic weight of oxygen is true of every matter of fact that I can assert. The logical foundation of everything that I believe is in myself. I may question everything that I build on it, but I cannot question it. It is therefore unique ; or, in other words, I am unique. I may or may not be able to prove what I call the " existence " of other people, but in any case I have a kind of " existence " which does not belong to them, because mine does not need to be proved ; it is self-evident. Others abide my question, I am free.

Now this is distasteful. I am therefore faced with the problem: how can I reconcile the two views, one which regards me as the *fons et origo* of the whole universe, past, present and such future as there may be, and the other which makes me out to be a negligible speck in immeasurable space, persisting for a brief moment in infinitely extended time? The general answer has been that they are irreconcilable ; the first view has been called " solipsism " and rejected. But it has been rejected only because it is irreconcilable with the second, not because of any intrinsic fallacy that has been found in it. This seems to me unsatisfactory. If the evidence for the first view is inescapable, then we must accept it and the conclusion to which it leads. The second view also, if properly expressed, can be made inescapable. Hence we must accept both, and the problem is to do this without becoming involved in a contradiction.

I called the evidence for the first view inescapable. The general admission has been that that view is " irrefutable ", but that is a question-begging term. It is irrefutable that there is a planet revolving round a star in a stellar system too far away to have yet been observed, on which a course of events is taking place exactly similar to that now occurring on the Earth. No one, I suppose, feels any compulsion to assert this, but no one could refute it. The argument for the so-called " solipsism ", however, is not of this character. We are not merely unable to refute it, we are bound to acknowledge that it is valid. If we do not accept the conclusion, it is incumbent on us to give some reason for not doing so, and that reason has not been given. A hypothetical person who accepts the conclusion has been called mad or frivolous or something of that kind, but that is not a reason. In fact, such a reaction is itself frivolous. If we are to take philosophy seriously we must refrain from abuse of those whose arguments we cannot answer and be ready to follow wherever reason leads. I therefore ask you to accept what I may call " the egocentric axiom ", and see what follows. I do not, let me say, ask you to accept solipsism. Despite the variety of meanings which the word has been given, they all agree in representing the solipsist as one who not only accepts the egocentric axiom but also denies the equivalence of himself and other people. But the evidence for that equivalence also is inescapable. I will not pause to consider why and in what sense this must be acknowledged because it is unlikely that any one will dispute it and in any case it will become clear at a later stage. What I want to maintain is that both the egocentric axiom and the essential equivalence of all human beings must be accepted, and solipsism is supposed to admit only the first. There is no name, so far as I know, for one who accepts both, nor am I concerned to make or to find one. All that I wish to assert, for the sake of clarity and not to avoid unpopularity, is that " solipsist " is not the word.

The problem with which we are faced may be expressed thus : How can I consistently hold that I contain and am more comprehensive than the whole universe, and also that the universe contains me as an infinitesimal part of itself? I might perhaps for a moment anticipate the result of the discussion by pointing out that the verbal form of the question itself suggests an answer. A sufficiently unsophisticated person would exclaim : " But why should you think these statements contradictory? It is ' I ' that contains the universe, and the universe contains ' me '. How can it be contradictory to say that x contains y and y contains z ? "

XUM

Our language is not always so helpful, but here I believe that its suggestion goes to the root of the matter. We have different words for "I" as subject and "me" as object, but we instinctively suppose that these two words represent what is logically one entity. I shall maintain that this is a mistake, and that "I" and "me" are essentially distinct. I do not say that they are unrelated, but that the relation between them, whatever it may be, is not that of identity.

Perhaps we may best approach the problem by considering what we mean by "the universe", which is to stand in such different relations to "I" and "me". There will be no misunderstanding, I think, with regard to the ostensive definition of this term, *i.e.* the picture which it evokes in our minds when it is uttered. It is what we may describe as the world about us, containing stars and houses and people and so on, and to avoid irrelevant subsidiary questions we may, at this stage at least, agree to limit it to what we ordinarily call the *physical* universe, disregarding any immaterial constituents that may conceivably inhabit living creatures or the world at large. We say that this universe "exists", and our evidence for this is that we perceive it, *i.e.* we have certain experiences on the basis of which we feel justified in making this assertion. (In accordance with the egocentric axiom I should of course have said something of the following kind. I perceive certain phenomena, which include some which I describe as related to "other persons", and associated with these other persons I have certain visual and auditory experiences which I interpret as concurring with still other perceptions, describable as "direct observation", in the conclusion that something which I call "the universe" can conveniently be postulated. But if I began to write like this I am sure that no one would read further. I shall therefore take the liberty whenever it seems desirable of speaking in the ordinary way, notwithstanding that what I say may be literally inconsistent with what I am maintaining. It must be remembered that our language was mainly constructed to accord with a mode of thinking that rejected the egocentric axiom, and can only be adapted to the acceptance of that axiom and its implications with great circumlocution. I shall therefore not hesitate freely to use sentences in which a captious critic will have no difficulty in finding anomalies, trusting my more intelligent readers to interpret them in accordance with the general point of view which I am taking up.) The question I want to ask is: How do we proceed from the sensations, which are the original data, to the conclusion, "the universe exists"?

There are two possible answers to this question, which are usually expressed as "by inference" and "by construction". When I say, "I infer that the universe exists", I presuppose that the existence of the universe is something which is prior (logically prior, I mean, though temporally prior would usually be implied also) to my perception of it, and that my sensations are merely the means by which I become aware of this prior truth. If there were no sensations, either mine or anyone else's, the meaning and the truth or otherwise of the statement, "the universe exists", would be quite unaffected. That is the ordinary commonsense view which until this century was accepted unquestioningly by most ordinary people and by scientists in particular.

When, on the other hand, I say, "I construct the universe", what I mean is that I form a concept of something to which I assign certain properties, including that of giving rise in me to the sensations that lead me to form it. To take a very simple example, when I say, "there is a billiard-ball in front of me", what I mean is that I see a round, red colour, feel a resistance to the touch, and so on, and I then construct a concept of a hard, extended, enduring object, able to reflect light selectively and to roll in a certain manner and to do a variety of other things such that, by some mysterious but describable route, its behaviour results in my having the sensations I have mentioned. Some of the properties I include in the concept are given it not to account for sensations directly associated with it but because of other sensations; for instance, I assign to it a solid interior although I have no direct experience at all that may be said to come from its interior. This is done in order to make the construction of the whole universe, corresponding to the whole field of experience, as economical of concepts as is possible. For this reason we ought, strictly speaking, always to discuss this question in terms of the universe and not of a single object in it, but if we bear the possible limitations in mind we can allow ourselves the simplicity of concentrating our attention on as small a field as we wish. The question we are considering is then which is the proper thing to say, "I infer the billiard-ball from my sensations" or "I mentally construct the billiard-ball so as to relate my sensations together"?

I am going to maintain that, in the present state of knowledge, the former has ceased to be permissible and the latter is inevitable. For this there are several reasons. In the first place, as a matter of simple description, we do construct, whether we infer or not. This can be seen best by considering the scientific rather than the commonsense view of the billiard-ball, although it is equally

true for both. The conception of a host of electrified mass-points interacting according to quantum laws is clearly something that needs imagination of a high order to bring it into being. There is no possibility of inferring it from the simple sensations of sight, touch, etc., for which it is made to account. We are not *led* to it; we have to conceive it *ab initio*, and then test it to see if it does in fact correspond with what we experience. If then, "to infer" means something different from "to construct", the difference can consist only in the addition to this simple description, of the postulate that what we construct has some independent property of "existence": we have inferred that there exists a billiard-ball of which we have constructed the description. But there is no necessity for this addition. The constructed description serves *all* the purposes for which we need to do anything at all beyond experiencing independent sensations. In so far, then, as inferring differs from constructing, it is without any justification.

Another reason for speaking in terms of construction rather than inference is that it is generally acknowledged that we cannot infer any sensation directly from others; for instance, I cannot infer from my sensations of a billiard-ball that after experiencing the sensation of striking it I shall have the sensation of seeing it move. This is brought out nowhere more clearly than in Bertrand Russell's book, *Human Knowledge: Its Scope and Limits*. Russell, however, wishes to maintain that, in both commonsense and scientific reasoning, we do infer, and he therefore claims that "among the premisses of our knowledge, there are some general propositions, or there is at least one general proposition, which is not analytically necessary, *i.e.* the hypothesis of its falsehood is not self-contradictory". If these general propositions are known, then they, together with our sensations, suffice to enable us to infer the existence and character of the universe. He proceeds to seek for these propositions, and ultimately arrives at five, which he grants may, by further thought, be reduced to a smaller number.

Now I am not here concerned to discuss these propositions; I wish only to point out that since it takes the greater part of a large book to bring them to light, and they are even then not final, they are not self-evident. Also, by hypothesis, they are not inferred, they belong to our "stock of uninferred knowledge". The only remaining possibility is that they are constructed: we have to frame them and then try them to see if they work. Hence, even if all that Russell maintains is granted, and the universe is allowed to be inferred, it cannot be inferred without

what is previously constructed. There seems little point in constructing in order to avoid construction.

A third reason for preferring construction to inference is that you can construct a number of independent descriptions of the universe without contradicting yourself, but you cannot infer from the same data that the one independently existing universe is two or more different things without at least one of the inferences being wrong. Now we have at least two independent descriptions of the universe—the commonsense description and the scientific description—and they do not agree. Hence, if the universe is inferred, we must decide which description is wrong, whereas if it is constructed we may use whichever suits our purpose on any particular occasion. That is, in fact, what we do.

The view taken by the advocates of inference is that the scientific and the commonsense descriptions are not different but that the former is simply a more precise and detailed version of the latter. This, however, is certainly wrong.

This is not difficult to see now that physics has reached a stage where its departure from commonsense is obvious. The constituents of a scientific table, for instance, obey a different kind of statistics from those of commonsense objects ; if you interchange two of them you must suppose not merely that you have obtained an exactly similar table—that would be wrong—but that you have actually the *same* table. That is nonsense when applied to commonsense material objects. But in fact the scientific universe has been essentially different from the commonsense universe right from the beginning of modern science, though until now they have been so nearly parallel that the divergence has not been realised. Newton's law of gravitation, for example, which dates from the seventeenth century, has been thought to describe the way in which planets move. It does not ; it has nothing to do with planets. What it describes is the way in which mass-points move. Now a mass-point is a constructed concept so little evident to commonsense that no one even imagined it before the seventeenth century. The path of a mass-point has been so close to that of a planet that the two have been identified in thought and the one assumed to be a more precise description of the other. But suppose that, through internal stresses, a planet exploded and burst into fragments. In all probability not one of those fragments would pursue the path prescribed by the law of gravitation, but the mass-point would do so. We call it the " centre of gravity " of the planet, and the explosion would make not the slightest difference to it.

This is not, of course, a new discovery—it is a part of classical physics—but since planets have not been in the habit of exploding there has been no confusion in supposing that the law of gravitation described their paths. But actually that law is part of a fundamentally different world from that which contains material objects.

We describe our experiences in terms of the commonsense world or the scientific world according to our needs. For ordinary practical affairs it is the commonsense world that we live in, but for understanding the relations of things we must turn to the scientific world. Playing cricket, for instance, is a commonsense activity, and the rules are framed in accordance with the commonsense conception of the world. If a batsman struck the ball so as to break it into pieces, the game would automatically cease, for the rules would become inapplicable ; they presuppose the integrity of the ball as a material object. Scientifically, the game could proceed without interruption, but it would be impracticable to require umpires, at the existing rates of pay, to determine whether a fieldsman had caught the centre of gravity of the ball before it reached the boundary. In the commonsense world we live and play games, but we do not understand it. In the scientific world we can understand what happens, but we cannot conduct our ordinary practical affairs. In civilised life we make the best of both worlds by translating, as far as we can, the scientific results into commonsense terms, and so apply them to our comfort or otherwise, but this is only partially possible. As the game of cricket shows, the fundamental difference between the two worlds remains.

I do not see how this can be properly understood unless we recognise that each world is constructed in order to serve its own particular purpose. If there is simply one independent external world whose character we are trying to infer from our experiences, we have to choose between them. Even that exaggerates our power : we have no choice, but must accept the one to which the rules of inference compel us. I do not know which that is, and I leave it to those who in this matter believe in inference to decide. I would simply point out that in fact very few, if any, accept the decision or are interested in it ; we all live in either world as occasion demands.

A final reason for preferring construction to inference is that we are thereby enabled to lay the foundations of philosophy in that which we cannot doubt, thus realising the Cartesian ideal. As we have seen, we can infer nothing about the world—*i.e.* nothing that enables us to predict future experience—from past

experience alone. If we insist on inferring, we must add some "principles of inference"—call them what you will—for which we cannot account, which might very well have been quite different and which are chosen on *ad hoc* grounds because they do in fact lead to the results we want. It is like choosing the rules of a game so that we shall be sure to win. All the consequences which we reach then rest on a grand assumption which, by hypothesis, may be wrong.

Let us see what it is that we cannot doubt. There are two kinds of such things, which we may for brevity call *experiences* and *principles of reasoning*. Experiences include all our sensations, emotions, passions, feelings of various kinds which cannot be included in a formal definition for the very reason that they are fundamental data; we can only mentally point to them and say, "those are experiences". I can only actually experience, of course, at the present moment, but what for brevity I have here called experiences are what in ordinary language would be more properly termed *memories* of experiences. Every experience of which I can take account is a memory, for by what we call the passage of time it is immediately thrown into the past before I can begin to reflect on it. Memories of experiences in this sense are indubitable. I may doubt any interpretation I give to them; I may even doubt whether in fact I had such an experience, but I cannot doubt that I have the consciousness now of having had it. Memories of this kind constitute indubitable data of the first kind.

The other kind is concerned with reasoning. When we read, for example, a mathematical theorem—say a proposition of Euclid—we feel compelled to proceed from one step to the next until we reach the conclusion. What I cannot doubt is the validity of such a passage. I cannot state in words what this indubitable thing is because again it is too fundamental for that. I can put in as many intermediate steps as I like, but always there remains a finite leap or leaps which I feel compelled to take. The indubitable "principles of reasoning" that enforce this leap are always between the lines. Like the elementary memories of experiences, they cannot be described in words without implying some particular interpretation of them that is open to question, but they themselves are not open to question.

This, of course, does not imply that any particular logical conclusion is indubitable. We cannot begin to apply the principles of reasoning until we have some premisses, some postulates from which deductions can be drawn, and all that we can hope

to say with certainty about the deductions is that they follow from the premisses. We can therefore never be certain, in an absolute sense, of the conclusion of any piece of reasoning, for we can have no indubitable premisses. The only indubitable things available are memories of experiences, and, as we have seen, these are not possible premisses because no inferences can be drawn from them; an experience does not imply anything at all. Our equipment for philosophising in a manner conformable to the Cartesian ideal consists only of principles of reasoning which cannot be applied without premisses, and memories of experiences which cannot act as premisses and can lead to nothing beyond themselves. What, then, are we to do?

There is only one thing that I can see: we can *invent* premisses —*i.e.* adopt arbitrarily certain postulates to which we give strict definitions—and then draw conclusions from them. The concepts in our postulates can then be paired off with our experiences (memories) in such a way that to each kind of experience there corresponds a particular concept; *e.g.* we may say that we will regard concept A as corresponding to experience α. If, then, in our deductions from the premisses the concept A appears in a certain context, we shall expect an experience α to appear in the corresponding context of experiences. In this way we can, in effect, use some experiences to predict others in spite of their barrenness. We cannot directly deduce anything from an experience, but we can translate it into rational terms from which we can deduce something, and then translate back again. This is, in fact, what we do in science. We do the same thing though more intuitively, in forming our conception of the common-sense world, but science affords the more convenient example for exposition.

This very abstract description can be made clearer by a specific example. I choose what I may call the geometrical theory of physics, *i.e.* the application of geometry to the correlation of our experiences of the physical world. In former days, when the inference view of science was accepted almost unquestioningly, it was supposed that the physical world was an externally existing entity submitted for our inspection, and that its constituents showed the same relations as those of the figures dealt with in euclidean geometry. The fact that we could determine the geometrical relations of things in advance of experience was regarded as mysterious, and, as is well known, Kant ascribed this to the *a priori* equipment of the mind; but, whatever the explanation might be, the necessity for natural objects to obey the euclidean theorems was not questioned.

This, as is now realised, was a mistake, but the precise relation between euclidean geometry and experience is not so widely understood, and it is worth while to examine it. Euclid's geometry is, in itself, a system of pure thought, starting from arbitrary postulates and definitions and then developing through their logical consequences. It nowhere makes contact with experience. For example, "a straight line is that which lies evenly between its extreme points". But how can we determine that a candidate for this honour does lie evenly between its extreme points? We are not told. Instead we are given a postulate: "let it be granted that a straight line may be drawn from any one point to any other point". Again, much use is made of the concept of equality: an isosceles triangle, for instance, is "a triangle two of whose sides are equal". There is much about equal things, such as, "things which are equal to the same thing are equal to one another", but there is nothing to tell us how to determine whether the sides of a triangle are equal or not. In the whole system of reasoning there is nothing that enables you to bring the concepts employed into relation with experience in any definite way. You are left to choose your own criterion of "lying evenly between two points", "equality", and the rest.

Let us, then, make a choice. It must necessarily be an arbitrary one, but let us suppose that we lay down a prescription for the construction of what we call a "straight rigid rod" and establish a correspondence between that and the geometrical straight line. Similarly we can define—again arbitrarily—what we call a "measuring rod" which, when used in a certain way, will give us a criterion of equality of straight lines. We can then construct a figure which corresponds to the euclidean isosceles triangle. We then look through Euclid's calculations and we see that the angles at the base of *his* isosceles triangle have been proved equal: is this true of ours also? We cannot say, for our measuring rod will not determine the equality of angles but only that of straight lines. We must therefore arbitrarily construct an instrument, called a "protractor", which will tell us whether two angles are equal or not. It turns out that we can do this, and we then find that, subject to the unavoidable errors of measurement, the angles at the base of our isosceles triangle also are equal.

But can we therefore say that we have proved in advance that the angles at the base of our isosceles triangle are equal? Clearly we cannot. There is nothing inevitable in the choice of our material analogues of the geometrical conceptions. Instead of

a straight rigid rod and a protractor we could have chosen what we call the path of a ray of light and an optical goniometer, or we could have chosen a piece of elastic and a loose fan. In the former case we would—again within the limits of errors of measurement—have confirmed Euclid, and in the latter case, in all probability, not. And there is no compulsion whatever lying on us to make one choice rather than another. What makes such an apparently futile proceeding important is the fact that, having once made the few arbitrary identifications involved in the premisses, the whole of the conclusions reached by the geometry become applicable to the world of experience. For instance, we can predict that the area of the square field of which one side is the hypotenuse of a right-angled triangular enclosure will be equal to the sum of the areas of the square fields lying against the other two sides. It would, I think, be humanly impossible to foresee this without the aid of geometry. And this is a type of all science. Every scientific hypothesis rests on arbitrary premisses arbitrarily coupled to experiences, and it remains valid so long as the consequences it entails allow the coupling to be maintained consistently.

One point in this requires comment. In giving this illustration I have been professing to show how we can, in effect, use some indubitable memories of experience to predict others by the device of linking them to the postulates of a logical system. But what I have linked to those postulates are material objects, which are not indubitable experiences at all but conceptions belonging to the commonsense world. This needs some explanation. I have done so because we are so accustomed to the commonsense world that by far the simplest way to explain a process is to do so in commonsense terms where that is possible. But I must qualify the description by saying that when I spoke of linking the euclidean straight line with a straight rigid rod, the linkage I was actually referring to was between the euclidean straight line and certain experiences which are included with others in the group represented in commonsense terms by the concept of a straight rigid rod. The commonsense object is a concept of something occupying a certain region of space for an indefinitely extended time and possessing a colour, a temperature, a weight, an elasticity, a density, an electrical resistance and a number of other properties which, in appropriate circumstances, can arouse in me experiences of sight, feeling and so on. That is not what I link with the euclidean straight line. I am indifferent to its colour, its taste and smell if it has any, its weight and what not; they can be anything you like so long as I obtain the

experiences that enable me to say, this is straight and rigid according to my definitions of those qualities. The linkage in question is therefore between those experiences and the euclidean conception, and when the euclidean conception turns up in a conclusion, all that I am entitled to expect are those experiences again.

Our procedure in science, then, is to construct a purely logical system of thought standing in an unambiguous relation to indubitable experiences. That logical system, on the largest scale, we call the universe. For commonsense purposes we do the same thing, but the logical system is quite different, for its purpose is not to relate together the largest possible number of experiences but to enable those of the most practical importance to be anticipated in the most convenient way. The concepts of the scientific universe are such things as mass-points, electromagnetic fields, thermodynamic equilibrium, genes, the unconscious, while those of the commonsense universe are planets, £5 notes, legs of mutton and policemen. For the purpose of elucidating our solipsistic problem we could choose either, but to confuse them would be fatal. Since, in the present state of knowledge, "myself" and "another person" are concepts that occur in both, it does not matter which we choose, and therefore, in spite of the fact that I could probably make my point more forcefully in terms of scientific conceptions, I choose those of commonsense because of their greater familiarity and also because most discussions of solipsism have been conducted in terms of them. I would only pause to point out the difference between the commonsense and the scientific "person" before proceeding.

The commonsense person we know well enough; whether myself or another, he is an individual who preserves his identity throughout a finite stretch of time, and during that time lives a sort of private life of his own but can communicate in some measure his thoughts and feelings to others. Each person is recognisable by the continuity of his bodily form, he is unique and, as a personality, indivisible. If he commits a crime he can be charged with it later as the same person, and he is held to be responsible for his former actions. The scientific person is not nearly so definitely conceived. A large part of him is said to be "unconscious", and he is usually largely unaware of the motives that prompt his actions. The same body may be associated with two different personalities and, on the other hand, it is possible that, through the merging together of the unconscious elements, the same fundamental "person" may be manifested through different bodies. It is indeed conceivable that with the

further progress of psychology it may be found necessary to abandon the idea of discrete personalities altogether, in somewhat the same way as physics has abandoned the idea of discrete identifiable electrons. That, however, is important for us now only because of its conceivability; we are not concerned with its probability. It serves to assure us that the scientific "person" is a construct which we can shape and re-shape as freely as we find necessary for the purpose of meeting the needs of psychology, and altogether without regard to any prejudices we may entertain concerning the necessary existence and obviousness and inferability or whatever you will of Mr. John Brown who lives next door.

Let us, however, return to John Brown, the commonsense John Brown, of whose identity and individuality we have no doubt. If I am asked why I assert that John Brown exists, I can only reply that I have seen and heard him and can bring witnesses who have done the same, that I have seen his name in the Directory, and so on—a mass of observations of my own. I can relate these observations together, and make sense of them in such a way as to enable me to make predictions that are realised, by postulating the "existence" of the said John Brown and giving that postulate the ordinary properties that we associate with a twentieth-century Englishman. It is true that this does not account for all my experiences of John Brown. I might, for instance, see him in Indian war-paint, leading his followers against a horde of cowboys while I, as a small boy, look on admiringly. This is hardly consistent with my postulate of him as a respectable suburban Civil Servant of my own age, but since we are now in the commonsense world, which is constructed for practical purposes only, I give that a special name, a *dream*, and dismiss it. This is perfectly legitimate, of course, in the commonsense world, because that world is not constructed in order to be "true" in the scientific sense, but in order to make everyday life go on as smoothly as possible. That can be done by ignoring awkward experiences like "dreams", and I am therefore fully justified in ignoring them.

Now the point I wish to make is that precisely the same reasons that led me to postulate John Brown lead me to postulate myself. All that I am aware of by actual experience is what, in ordinary language, I say is happening to me at the present moment. The conception of a continuously existing being of fairly advanced age, bearing my name and having a more or less disreputable past, is a conception which I form in order to relate together memories of experiences which I have now. The direct

part which those memories take in the whole conception of myself is very small. For instance, I postulate that this being, myself, attended a certain school continuously for several years, whereas all that I remember of my experiences at that school is contained in a few isolated incidents. I can, and in fact do, repeatedly modify my description of myself as I take new experiences into account. Thus, whereas, on grounds of memory alone, I say that a certain event A happened before another event B, I do not hesitate to change the order of these events as the result of seeing certain documents. In this and in other ways I am constantly changing my description of the being which I call myself, exactly as I might change my description of the being which I call John Brown.

The description of a commonsense person, then, as a postulate formed to make sense of my present experience (*i.e.* to fit into a logical scheme which can be consistently linked to experience as previously outlined) is applicable equally to John Brown and to me. I do not know of any other way of describing the commonsense world (or the scientific world for that matter) that permits this absolute equivalence of John Brown and me to be acknowledged. What makes it possible is the recognition that the data on which I have to work are all memories of experiences, that every concept I construct has its definition determined by my desire to include it consistently in a logical scheme which can be linked to those memories of experiences in the manner described, and that I freely take the liberty of creating, modifying and destroying such concepts in order to maintain the linkage as fresh memories of experience are taken into account. The complete logical system—*i.e.* the commonsense world—at which I arrive in this way includes *everything* that is ordinarily called the universe—matter, time and space. I exercise the same liberty of changing my conceptions of time and space as I do of changing my conceptions of matter and persons. The whole world, in all its aspects, is unceasingly being renewed in order to satisfy our desire to live in a commonsense way or, in science, to include all experiences in a single system.

But this result has not been attained without a cost (if cost is the proper word for what turns out to be an enormous advantage). "I" has been left out of the world. Both Mr. Brown and me are postulates formed to correlate memories of experiences, but those experiences before they become memories belonged to "I". That is the egocentric axiom. We can hardly help asking the question: what can we say about "I"? The answer is, nothing, except in a negative way. "I" is

that which experiences, but before an experience becomes data for philosophising it is no longer an experience but a memory of experience, made such by what we call "the passage of time", though the phrase is extremely misleading because it tends to identify this fundamental fact of consciousness itself with the concept of an extension which we call "time" in physics and in ordinary life and in which we arrange and measure the intervals between events. This is one of the greatest difficulties presented to us by our traditional language, which was formed to accord with a way of thinking in which "I" and "me" were regarded as identical. But that there is a fundamental difference between the passage of time which is the basic fact of consciousness, and the concept which we call time in describing the order of the universe, can perhaps be seen best by considering what we mean by the *reversal* of time. What usually goes by that name is a magical state of affairs in which events occur in the opposite to the natural order; apples leap from the ground to join themselves to trees; they gradually shrink until they become blossoms, and so on. The reversal of the time of consciousness, however, would be a state of affairs in which I would know much of what was going to happen, be conscious of it approaching, and then, as soon as I had experienced it, lose knowledge of it completely except in so far as I might be able to calculate it from my knowledge of what was still in the future, as we now become aware of coming eclipses from past experience. These two completely different things we call by the same name, and it is therefore perhaps scarcely surprising that we find ourselves faced by apparently insoluble problems. I will call the time of consciousness—that which enables me to call a particular datum of consciousness a "memory of experience" in contrast to a simultaneous datum which I call a "present experience"—*subjective* time, and the extended time of physics or of commonsense (ignoring, as relatively unimportant in this connection, the difference between them), *physical* time. The latter is a voluntarily formed concept, but the former is inviolable: it pertains to "I" and not to "me", and as such is not available for modification.

We often say that it is a fundamental fact of consciousness that I am always at the present moment. This looks like a positive assertion about "I", but in fact it is not; it is simply the negative statement that "I" does not conform to the physical time order. If we try to make it conform, all that we can do is to use some such nonsensical phrase as this, for clearly it is nonsensical to speak of anything being always at the present

moment. The present moment—indeed, any moment—in physical time is simply a point having no magnitude, while "always" is another name for the whole, possibly infinite, stretch of time. "Always at the present moment" is therefore a contradiction. At the present moment, both what I say I am "actually now experiencing" and what I say "I am remembering occurred last year" are equally present. At my leisure I sort them out and associate with each memory a postulated event or range of events which I then arrange in sequence in physical time. I am always "at the present moment" while I am doing it, but me is getting older as I proceed, and each event recedes further into the physical past as it remains fixed at the point of physical time at which I have placed it.

What are the consequences of accepting this view? They are probably the opposite of what would be expected. It has been the constant fear of philosophers that acceptance of the egocentric axiom would subordinate the whole world to "I", and so must be avoided at all costs. In fact it does something quite different; it removes "I" from the world as something about which we cannot philosophise, and so leaves the philosopher free to give full scope to his imagination and reason without the dread of having had to put something surreptitiously behind his back because, although he cannot deny it, it appears so absurd that he is ashamed to acknowledge it. Released from that nightmare, he need fear no danger of straying into forbidden paths. "I" consists of that which cannot go into the past as memory; and therefore cannot—not should not, but *cannot*—become an object of thought, data for philosophical consideration. Whatever can be so treated is a part, not of "I" but of "me" or the rest of the world.

The fundamental problem with which we are faced then, is that of purifying our statements of legitimate philosophical problems, *i.e.* ridding them of all that presupposes that "me" includes what properly belongs to "I". All that remains is left untouched by these considerations. What is removed is perhaps slight in bulk—this is no sovereign prescription for solving all philosophical problems, it solves none of them—but I think it includes most, if not all, of the traditional intractable questions. I will try in conclusion to indicate one or two of them.

Our leading clue is that whatever in experience refuses to go over into the past and become a memory belongs to "I", and nothing can be said about it. It includes the whole of what I may call "living experience" (I must do the best I can with an inappropriate language), all that distinguishes my present view

from my window with my memory of the same view this time yesterday. Both the present view and the memory are experienced now in subjective time, and in so far as I can describe them they are identical, yet I have not the slightest doubt that one is distinguished from the other. That quality of one which enables me to say that it is *not* a memory belongs to "I". It has gone before I can write the words down so far as it pertains to the describable view then spoken of, but it is still with me, attached to another replica of the same scene. The "presentness" that refuses to go into the past of physical time, and yet does not vanish but is always experienced, is what characterises "I". Philosophy can say nothing about it. Let us see what this removes from philosophical consideration.

In the first place, it is clear that we can say nothing at all about the possibility or otherwise of death in the sense of annihilation of consciousness. Death is a familiar feature of both the scientific and the commonsense worlds, and I can say with practical certainty that both John Brown and me will die; *i.e.* there will be a moment in the future of physical time at which many of the phenomena which I describe as the behaviour of John Brown or of me will come to an abrupt end; or, in other words, when the postulate of a living John Brown or me will fail to afford a rational correlation of memories of experiences allotted to later moments in physical time. The question is still open whether further experiences of the kind studied by the Society for Psychical Research, for instance, may lead to a modification of this belief. But, however that may be, no considerations of this or of any other similar kind have any bearing on "I". Since the concept of physical time has no relevance to "I", it is simply meaningless to ask whether a time will come when "I" will cease to exist. This is not, of course, a proof of survival of death. That question can go on being discussed as before; it has nothing to do with living experience.

Another such question is that of freedom of the will. At any moment I am faced with an indefinitely large number of courses of action. I choose one of them. It is ambiguous to ask whether my action was "determined". It is determined if I determine it. When it is performed it becomes a memory, and is then subject to correlation with other memories, and it is perfectly possible for me then to be able to say, "I see now that what made me do so and so was such and such". The action is then truly determined. But *now*, in identical circumstances (so far as they can be identical) I may choose a different action. When it is done I can, as before, say that it was determined and that it

differed from the first action because a new determining factor—my knowledge of what determined the previous one—was operating. Clearly this can go on indefinitely. Every action, having once been performed, takes its place among the memories that constitute the data of philosophy, and there is no reason to doubt that it can be related to other memories in the manner which we are accustomed to call *causation* or *determination*, although, in the present state of knowledge, I do not think we are entitled to assume that it will necessarily be deducible wholly from events occurring *earlier* in physical time. But what travels along, so to speak, and refuses to be left stranded in the bed of the time-stream, is the freedom to choose a different action from the one performed last time or the one required by any scheme of determination that I may have discovered or constructed. "I" is free, but "me" is determined—or may become so with fuller knowledge. Note that this is not a positive statement about "I". To be free is simply not to be determined. Being determined is the positive thing, for one has to do the determining; that is the whole business of philosophy. What more fundamental freedom can there be than freedom from being philosophised about?

I will conclude with a reference to the logical positivists' criterion of meaning, namely, that the meaning of a statement lies in the means which must be taken to verify it. This is not so directly concerned with the distinction between "I" and "me" as the matter just discussed, but it is closely related to our general theme.

I think the defect of the criterion is that it fails to respect the fundamental distinction between experience and reason—or, more precisely, between memories of experiences and the concepts occurring in the logical system which constitutes the world. If the word "meaning" is to have any significance at all justifiable in view of its ordinary use, it must remain a logical term, pertaining to reason, and therefore it should be definable quite independently of experience. But the logical positivists' criterion denies it a significance within a logical system, and relates it to the connection between the logical system and experience. Hence it cannot be acceptable.

All the sentences we commonly use, whether in science or in commonsense conversation, are intended to relate to the logical system which is the description of the universe. Consequently they are properly called meaningful if they do in fact signify something intelligible within the concepts of that system. The logical positivists' criterion, however, defines meaning in terms

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of the linkage of the system with experience, and therefore they must regard anything within any logical system which cannot be so linked as meaningless, notwithstanding that its purport within the system is perfectly clear. This is at best an unfortunate use of a well established word.

The point can be illustrated in terms of either the scientific or the commonsense world: let us begin with science. Consider the statement: the two points in which two parallel straight lines meet are at a maximum distance apart in space. In terms of euclidean geometry this statement is meaningless; parallel straight lines in euclidean space do not meet and there is no maximum distance in that space. In terms of riemannian geometry, however, it has a clear meaning; in the geometry of a spherical surface, for instance, it not only means something but happens also to be true. None of this has any reference to experience. Now suppose we define meaning in the logical positivists' way, in terms of the means by which we test the statement. Then it would seem that we do not know whether it has a meaning or not unless we know what happens when we extend straight rigid rods indefinitely in both directions. At present we certainly do not know this. We believe that space free from matter would be "spherical" in the riemannian sense, but that actual space is disturbed in an unspecifiable way by the presence of what matter there is, and whether the rods would ever meet in it we have no idea. We therefore do not know whether we can test the theorem about the distance apart of their intersections or not. It seems foolish to say that one does not know whether there is any meaning in something that he perfectly well understands.

I have chosen this type of example to follow naturally the geometrical example I chose earlier, but in fact any scientific hypothesis could be selected; the meaning of a statement relating to it must be sought within the terms of the hypothesis and not in its external relations. It was meaningful of the older astronomers to say that the material of the celestial spheres was an incorruptible quintessence, or fifth element, notwithstanding that the statement bore no relation to any possible experience, because their universe, or logical system, included such spheres as necessary concepts, and the question of their composition was therefore a relevant one. It was meaningful of the nineteenth-century physicists to assign a value to the density of the luminiferous ether, although, as it turned out, the "ether" hadn't the properties which would have enabled that value to be determined. And so on, throughout the whole of physics.

Examples from the commonsense world are not so numerous, since the great stability of that world is one of the chief reasons for its practical efficacy, and the point under discussion is best illustrated when the logical system changes and the phenomena do not. But consider the statement: Mary Jones is a witch. The commonsense world of a few centuries ago included the Devil, and the meaning of the statement was that Mary Jones was able to do superhuman things by his aid. The "verification" of the assertion, however, might have been the fact that someone at whom she had looked later became ill, or that when thrown into the lake she did not drown. I am not sure whether the logical positivists would grant a meaning to the statement, or, if so, what it would be. All that I want to propose is that, in this as in other cases, the meaning should be defined within the logical system alone, and the applicability of that system to experience should be denoted by some other word.

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II.—SEEKING, SCRUTINIZING AND SEEING

By F. N. Sibley

This paper has several connected aims. In the first place, I attempt to examine in some detail certain aspects of the logic of various perception and observation concepts, and to show some of the connexions between them. To that extent I am exploring the nature of looking, seeing, scrutinizing, etc. In order to do this I begin from some distinctions drawn by Professor Ryle in *The Concept of Mind*;[1] and I try to show both that Ryle overlooks many of the complexities of perception and observation verbs and that, as a result, he classifies some of the functions they perform in the wrong logical categories. More important, this enables us to see that what he says about seeing and the verb 'see' is either incomplete or mistaken; and it thereby clears the way for saying some positive things about the nature of seeing.

Seeking and Scrutinizing

1. Within the general category of Occurrences or Episodes, Ryle draws attention to two particularly important types of episodes which he calls, respectively, 'tasks' and 'achievements'. He claims that certain verbs and verbal expressions connected with perception, *e.g.* 'see', 'feel', 'look', 'listen', 'observe', 'probe', 'keep in sight', etc., fall into one or other of the two groups which he labels 'task verbs' and 'achievement verbs'. As instances exemplifying this contrast he offers the pairs 'hunting and finding', 'travelling and arriving', 'looking and seeing', 'listening and hearing' (149); and the suggestion is, here as elsewhere in the book, that there are, in each pair, not two activities, but one activity with a certain upshot or culmination. Each pair contains a task verb and an appropriate culmination verb. Other examples given of task words are 'scan' and 'search' (238), and, of achievement words, 'perceive', 'detect', 'cure', 'solve', and 'hit the bull's eye' (238). Some verbs, like 'observe' (237), 'taste' and 'smell', may be used either as task or as achievement verbs. In this paper I shall be interested primarily in those perception and observation

[1] Page references are given in parentheses in the text.

verbs which are concerned with sight, *e.g.* 'see', 'watch', 'gaze', 'spot', 'discern', 'notice', 'examine', 'scrutinize', 'glimpse' and 'scan', though much of what I shall say has some application to hearing and the other senses.

Now I think that by classifying the verbs I have mentioned as signifying either tasks or their corresponding achievements, Ryle has masked, misrepresented, or failed to notice some quite important differences. One of the results of this is that he is able to conclude, mistakenly, that the verbs 'see' and 'hear' are mainly or primarily achievement verbs and that, as such, they stand not for activities but for outcomes of activities. To discuss these questions, therefore, I shall drop some of Ryle's labels and introduce some of my own.

If we confine ourselves to thinking about the sort of tasks that may culminate in a success or a failure, and if we take, as typical examples, racing (with or without winning) and hunting or seeking (with or without finding), it certainly seems as if looking (contrasted with seeing) and listening (contrasted with hearing) do fall into this category; but it is very doubtful whether most of Ryle's other examples do. This can be brought out by drawing attention to the contrast between the typical use of 'look for', 'listen for', 'watch for' and 'search for', which I shall call 'seek verbs' or 'quest verbs', and that of 'look at', 'listen to', 'watch' and 'search', which I shall call 'watch verbs' or 'scrutiny verbs'. 'Looking for a needle in a haystack' certainly contains a seek verb. Such looking may or may not be successful. If it is, it terminates in finding, or seeing, or spotting, or discovering the needle. Thus Ryle's examples, looking and listening, certainly can be examples of activities, the successful culminations of which are seeing, hearing and the rest. But the verbs 'look' and 'listen' strike us as good examples of seek or quest verbs only so long as we think of them as meaning 'look for' and 'listen for', which is exactly what we are led to do by their occurrence in the quoted pairs 'looking and seeing' and 'listening and hearing'. If, on the other hand, we interpret 'look' and 'listen' as 'look *at*' and 'listen *to*', the situation is very different. 'Looking at' is not 'looking for' and 'watching' is not 'watching for'. The fact is, in their dominant sense, 'look at', 'watch' and 'listen to' are not quest verbs at all; nor are Ryle's other examples, verbs like 'probe', 'scan', 'savour', 'observe', 'examine' and 'scrutinize'. I shall classify all these together also as 'watch' or 'scrutiny' verbs, though without intending to suggest that there are no differences between them.

2. It is easy to understand how 'look at' and 'look for' might come to be confused, given the double role which 'look' may play. But the tendency to classify verbs like 'observe', 'savour' and 'examine' with 'look for', instead of with 'look at', or rather, the failure to see that there are two different types of concept here, is not to be explained in this way. It probably has two sources. First, both groups have many logical features in common. They are all activity or task verbs of certain kinds; for example, they can all be qualified by adverbs of effort, care and duration. Secondly, there are other features which, at first glance, they appear to have in common, but which in reality they do not share at all. Yet the logical differences between the two categories can, I think, be made quite explicit.

To begin with, looking for something precedes finding that something and, *a fortiori*, precedes examining it. When I look for a photograph of Westminster Abbey, I may succeed or I may fail, *i.e.* I may or may not spot or find it. But when I am looking *at* the photograph, or examining, scanning, scrutinizing or poring over it, the seeking and its success are behind me. What is more, it is not simply that a bit of seeking precedes a bit of examining; one might almost say that examining something is necessarily preceded by seeking and finding it (or if not by seeking, at least, as in the case of happy accidents, by finding). This is not quite true; it is a little too strong. What is necessarily presupposed is that, before you can examine something, you must have come to see it somehow. Sometimes we do come to see things by spotting or finding them and as a result of seeking. But on other occasions, as when I begin scrutinizing something in my field of vision that I have been able to see all along, it is too strong to say that I spotted or found it before I began scrutinizing it.[1] It was simply there and I could see it. However, with this reservation made, it can still be said that seeking an object does not logically require any prior occurrences of any sort, but that examining it must have been preceded by something, *i.e.* by coming to see it in some way. Thus, if anyone should wish to maintain that examining is really a kind of quest or seeking, he must admit that it is a different kind; it is a kind of seeking that presupposes something else, and that something else may itself be a seeking. But if this is so, then there are genuinely two types of concepts involved. Another way of putting the matter would be to say that the direct object of the

[1] The need for this proviso was pointed out to me by Mr. David Sachs. I am indebted to him for helpful discussion of several parts of this paper in an earlier draft.

verb 'seek' refers to something not yet found, while that of the verb 'examine' refers to something already found. You cannot seek an object if it is already found, or examine it before it is found.

There are other differences too. Scrutinies have no typical corresponding successes (or failures) in the way quests have. Looking for necessarily has an aim, for 'looking for' means 'trying to find'; watching need not have any aim. When I am engaged in examining the photograph, the quest for it is behind me and I am not necessarily engaged in any further quest. I can look at, scrutinize, or examine it without trying to find something. Similarly, it is quite possible to examine, say, someone's face or a painting without examining it *for* anything, that is, without seeking to find anything; you may just be trying to impress it on your memory or recording what its features are like. As a result, 'successfully', which may always apply to a quest verb, often cannot be applied to watchings and scrutinies at all. For example, 'I listened carefully for the sound of the door opening but somehow I missed it' indicates a piece of unsuccessful listening. But 'I spent the afternoon listening to their conversation' tells of neither success nor failure. It makes no sense to ask about a successful outcome to my listening; there is no outcome. Or compare the verbs in 'I went out to look for the children, saw them in the field, sat down and watched them playing'. The looking for culminated in a success, seeing or finding them, but the watching was not another bit of seeking or looking for, and met with neither success nor failure. Looking at or scrutinizing, then, are not looking for or seeking (though this is not to deny that sometimes we scrutinize in order to find); nor are all task verbs quest or seek verbs.

3. It might be thought that this is to exaggerate the difference between quest verbs and scrutiny verbs, or even to invent a distinction where really there is none. For there are, as I have said, several reasons for supposing them identical and hence for denying the distinction. I shall consider these reasons one by one.

(*a*) It is true of course, and this might seem to constitute one objection to what I have said, that sometimes, perhaps even usually, we look at, scrutinize, probe or scan with a special aim, to find something or other quite specific. Indeed, it might be urged, we seldom undertake examinations except to find something particular. Examinations are *for* something; so the expression to discuss is 'examine X *for* Y'. Moreover, when

this is the case, our examinations, like our quests, sometimes succeed in discovering and sometimes fail to discover what we set out to find. Thus it might be concluded that, both in point of having a particular aim or being *for* something, and, what is a consequence thereof, in being either successful or not, scrutinies are identical with quests, or at least sufficiently like them to be grouped with them. That being so, Ryle was justified in grouping them all together as "observational undertakings, the success of which may be in question" (222) and in talking of the "corresponding successes" of these tasks. There are, after all, no differences between 'look for', 'look at' and 'scrutinize' in respect of their 'quest' element. Examining is a kind of seeking.

In reply to this objection I want to admit, of course, that remarks like 'I listened to his speech to find out his political views' and 'the doctor examined her skin for signs of measles' are natural and common enough. In some good sense we can ask whether such listenings and examinings have been successful or not. 'I was successful' would mean that I found what I was looking for or found out what I wanted to. But even so, even if examinations were always engaged in in order to find something fairly specific—and I have already argued that they are not—there would still be notable differences between quest concepts and scrutiny concepts.

(i) In the first place, the success involved in seeking X is concerned with the same object; it is finding X. But the kind of success that attends examining X is concerned with a different object, Y. You examine the photograph to find the likeness, not to find the photograph and, conversely, if you find the bloodstains, it was not the stains you were examining, but the victim's clothes. One might borrow a term from grammar and say that successes of quests are 'internal' or 'cognate' successes. Hence, even when we are examining X for something specific, which is the kind of case where, since we are trying to find something, it is plausible to call 'examining' a quest verb, success attends on the two kinds of activity in question in different ways.

(ii) It may be urged, however, that if we are to see the resemblance between quests and scrutinies, we ought to omit reference to X and compare them with respect to the object sought (Y) in each case. But even so, if for instance we concentrate attention on the fact that examining often aims at finding something, and try to compare 'seek Y' with 'examine for Y', the differences already mentioned come to light in new ways. The verb

'examine' in the expression 'examine for', being transitive, must, as a point of grammar, take a direct as well as an indirect object; and, as a point of logic, there must always be something being examined as well as something being sought (X as well as Y). Or even if—though I do not think it is so—English grammatical usage does permit, as with some other verbs (*e.g.* 'he is testing for radio-activity'), that 'examine' may be used without a direct object, the logical point remains: when scrutiny-verbs are used, there must be something, whether mentioned or not, which is being scrutinized. Grammatically speaking, it must always be possible to supply a direct object. Thus, though an objector might stress the 'quest' element in 'examine for', there is an irreducible complexity present which is not to be found in simple quest verbs.

(iii) Other differences still remain too; for this extra complexity results from the fact that examining X for Y is not merely seeking Y. It is doing something else as well, *viz.* some examining of X, which is a quite different kind of activity from seeking, though one which is often a good, the best, or even the only, way of finding Y. If we are looking for signs of malnutrition in the district, the best way may be to examine the children, and if we are seeking clues to the murder, we may succeed best by examining the tool-shed. Examining is, or may be, something one may do in order to find or as a means to finding. It is a way of looking for. Seeking, on the other hand, is not a way of looking for; it is looking for. 'Why is he examining X?' can be answered by 'In order to find Y', but no one would bother to answer 'Why is he looking for Y?' by 'In order to find Y'. (We should probably even interpret this question in some other way, as, *e.g.* 'Why does he want to find Y?') For it is analytic that you seek Y in order to find Y; but even when examining is examining for something, the kind of success involved in finding Y is not analytically connected in this way with the activity 'examining'. 'Racing in order to win' is a pleonasm, but 'running hard in order to win' is not. Seeking and hunting have their own typical or natural or, as Ryle says, "corresponding successes", but not so examining and scrutinizing. Activities of the two different types may on occasion be harnessed together in such a way that the doing of one leads to success in the other. But 'running hard' is no more identical with 'racing' than 'using a circular saw' is with 'cutting up logs'. Thus even if we consider examining as if it were always undertaken in order to find something specific, it still obviously differs from seeking.

(*b*) There is also, however, a second and much more natural source of confusion between quests and scrutinies. I have argued so far that there can be scrutinies with no special aim of finding this or that, and secondly that even when scrutinies have a special aim, they are still separable and distinguishable from quests. All this may be admitted. Yet it may still very plausibly be suggested that every scrutiny, even when there is no specific aim, is necessarily and by its very nature a kind of quest. For it seems obvious that any and every scrutiny aims at and succeeds in finding out something or other. People may sometimes examine without examining for this or that particular thing; but no one ever examines without finding out or at least being able to report something, that such and such was there and such and such else was not. Indeed, this is so essentially involved in examining that if, after claiming to make an examination, a person has discovered nothing at all and is quite unable to make any report, it will be said that he did not really carry out the examination, but was at best shamming or pretending. If I am asked to examine the top of the table and afterwards cannot report that, say, it is painted, polished or unpolished, rough, smooth, dented or scratched, or indeed anything at all about it, no one will concede that I have in fact examined it. There is some truth in this objection. But there are at least two good reasons why it should not lead us to ignore or deny the differences between quests and scrutinies.

(i) It is true that anyone who has carried out an examination or a scrutiny will always be in a position to make some kind of report. But it would be unnatural and improper to refer to this as a 'success'. 'Successful examination' is an appropriate expression only when, by means of an examination, a specific thing is sought and found; it is not appropriate in the kind of case now under consideration. A doctor giving a patient a routine general examination will notice and be able to report many things, a number of them being negative reactions. We may ask him afterwards if the findings of the examination were satisfactory; but it would sound most odd to ask him 'Was it a successful examination?' It would make perfectly good sense to ask him this question, on the other hand, if he were examining the patient to discover the cause of a specific pain or disorder, for it is always intelligible and never odd to ask of a quest whether it was successful or not.

(ii) The objection under consideration draws attention to the fact that any *bona fide* scrutiny not only aims at but must necessarily produce some positive results or findings. But this

very fact itself helps to illustrate how different scrutinizing is from seeking. Whereas any scrutiny that is in some degree careful or thorough will yield some result, a quest, no matter how careful or thorough it has been, may fail to do so. It is possible to complete the course, really race hard, and yet lose the race. It is possible to search the garden for a spade and fail to find one because there is no spade there. But these failures do not entail that you were not really racing or searching. The fact that there was no spade in the garden may explain or excuse your failure to find one, but a failure it certainly was; racing hard never guarantees a victory. So even if we allowed ourselves, somewhat unnaturally, to speak of the 'success' or 'failure' of an examination, we should be forced to admit that, whereas a thorough and careful quest may lead to either success or failure, a thorough and careful examination always entails some degree of 'success'. Total 'failure' is impossible. The sentences 'If he is not trying to find out anything at all he is not really examining' and 'If he is not trying to win (find) he is not really racing (looking)' look alike, are both true, and hint that scrutinies and quests are identical. That they are not identical can be seen by contrasting two other similar-looking sentences, 'If he did not notice or discover something he was not really examining' and 'If he did not win (find the thimble) he was not really racing (looking for it)'. The former is true but the latter is by no means necessarily true.

One further objection might be raised here against my saying that any examination will produce at least some positive findings. Clearly it is possible to examine something and yet produce reports which are quite erroneous, or which omit and leave unnoticed many things that were there to be found. The quality and extent of the results depend upon the care and thoroughness of the examination. It remains true of necessity nevertheless that, as I have said, any really thorough or careful examination turns up some positive result or other, and this is not necessarily true of seeking, no matter how careful or thorough.

The reason the two foregoing points are true can be traced back to a fundamental difference between quests and scrutinies already mentioned. Examining need not have a special aim, and anything found (or even reported as not being present), no matter what it is, constitutes a positive discovery; but there cannot be a quest without a special aim, without a specific object or objects being sought. No one is ever told to go and look for whatever is there. (When we do speak of people setting out to

look for whatever they can find, for example, shipwrecked mariners on desert islands, this is really only a way of referring to something or other fairly specific which is made clear by the context, say, something edible or useful. That this is so is proved by the fact that shipwrecked mariners can draw a blank. But if they were genuinely looking for 'whatever they could find', they would always find something.) It might also be noticed that, closely connected with what has just been said, there is yet a further way of emphasizing the difference between quests and scrutinies. What is found by an examination is found in the course of the examination. What is found by a successful quest, on the other hand, is found not in the course of the quest, but at the end of it.

4. The fact that some tasks are not of the type which ends in success or failure may be allowed to draw our attention to a related side-issue. I have argued that quests end in success or failure and that scrutinies as such (*i.e.* when not part of a quest) do not. Successes, however, are not the only kind of ends or achievements. There are several kinds of verbs, the function of which is normally to indicate not an activity, but the ending, or manner of ending, of an activity. First, there are verbs like 'cease' and 'stop'; these tell simply that an activity has ended. Secondly, there are those like 'conclude', 'complete' and 'arrive'; these signify not merely that an activity has ended, but also that it aimed at, and reached, a terminal point of some sort. Thirdly, there are those like 'win', 'find', 'spot' and 'discover' which indicate not merely stopping, nor reaching a terminal point, but gaining a success. The three types of endings (and three corresponding types of activities) can be illustrated by the following examples: (i) 'He ran for a few yards and then stopped', (ii) 'He set out to run ten laps and completed the distance', (iii) 'He ran in the race and won'. Perhaps only the second and third types should be called 'achievements', since merely to stop is not necessarily to achieve anything. But if we do use 'achievement' to cover both the second and third types, we ought no longer to equate achievements with successes as Ryle does. He groups examples of the completion type ('travel and arrive') along with examples of the success type ('hunt and find', 'look and see') and refers to them all as 'achievements or successes'.

This failure to distinguish two types of achievements, and, what results therefrom, the employment of the two labels 'success' and 'achievement' interchangeably, may also help to facilitate the erroneous assimilation of scrutinies to quests.

For it is certain that scrutinies or examinations, even when they have no special aim and are not part of a quest, can lead to or end in achievements. The fact is that we almost always have standards for the completion of scrutinies. These standards may be determined according to circumstances by routine, convention, or the nature of the subject-matter. The doctor asked to carry out a thorough general examination may complete or fail to complete the task set him. The requirements for completing it are that he shall have examined a limited number of specifiable items, circulatory system, respiratory system, alimentary and digestive system and so on, and when he has completed the task he has certainly achieved something. On other occasions, the standards for completeness may be fairly arbitrary; I may announce that I have completed an examination (and not that I have merely stopped) when I have done all I intend to do or feel like doing. Other people may dispute the satisfactoriness of my standard for what constitutes a complete examination; but in all these cases, whatever the standards are, there are some standards or other for completeness. (It might be noted, however, that standards for completeness are not the same as standards for thoroughness. An examination can be thorough as far as it goes and yet be partial or incomplete.) So anyone who has carried out or completed his examination is entitled to boast of having achieved something. But only failure to differentiate could make us suppose that such an achievement is of the 'success' type, that is to say, the type appropriate to quests.

5. The outcome of this long discussion is that quests exemplify a logical category distinct from scrutinies, even though seeking may sometimes require us to do some scrutinizing. However, as I suggested earlier, it must not be supposed that within these large categories there are no differences. The notions of inspecting, investigating, probing, analysing and testing are, in the respects so far discussed, quite enough like scrutinizing and examining to be grouped all together as 'scrutinies'. But they are all different notions, and could undoubtedly be grouped according to other cross-classifications for other purposes.

Sometimes differences between concepts within the group can best be expressed by saying that the verbs mark different specific activities of a generically similar 'scrutiny' kind. For example, inspecting teeth is not probing teeth, and examining a soldier's equipment is not inspecting it, though a kit inspection will involve a certain amount of some sort of examining. They are all distinct activities. Sometimes, again, differences within the

main group of scrutinies are best brought out by noticing that certain verbs are suited only to certain objects. Teeth and tissue can be probed, but not drawers or pockets. Crimes and scandals can be investigated, but not inspected. Even 'scrutinize' and 'examine', which I have so far used interchangeably, are not quite alike; the doctor does not simply scrutinize a wound, he examines it. Sometimes even, changes in the type of object sought produce some slight change of sense in one and the same verb. Looking for signs of annoyance in a face is unlike looking for pockmarks on it; it is the kind of examination that dwells on general impressions rather than the kind that demands minute attention for each and every part.

6. Next, I shall briefly mention a kind of visual activity or occurrence, in the main very different from scrutinies, yet enough like them to justify some short comments. This kind of occurrence I shall call 'mere watchings'. 'Merely watching' or 'merely looking at' is not a task, like watching, looking at, or scrutinizing. It is not something one engages in, undertakes, sets oneself to do, or applies oneself to. Consequently, the adverbs 'carefully' and 'carelessly' are both equally out of place here. If a person is idly looking or gazing out of the window watching the cars go past or the children playing in the field, and someone asks the question 'Are you watching them carefully?' the answer will be 'No'. But neither is he watching them carelessly. This kind of watching, not being a task, makes no claim to carefulness, thoroughness, or purposefulness, and so cannot be careless or slipshod either. In these ways it is unlike the sort of watching and scrutinizing we have discussed up till now, for any scrutiny is of necessity carried out with some degree of care or lack of it. Other verbs regularly used in this non-task or 'merely watching' way are 'gaze at', 'gape at' and 'stare at'. (Note that the verbs 'watch' and 'look at', but not 'examine' and 'scrutinize', can be used in both the 'non-task' and the 'task' senses.)

The point of mentioning these non-task verbs and the notion of 'mere watching' is that, differing from scrutinies in many ways as they do, they nevertheless resemble them in at least one respect. 'Gazing at', 'merely watching', 'looking at', and 'examine' all alike take, as direct object, something which has already been found or spotted or seen; that is, both scrutinies and mere watchings follow upon and, with the reservation mentioned earlier, presuppose a prior finding, or a prior seeking and finding. You cannot stare at something until you have spotted or otherwise caught sight of it. In this, even if in

nothing else, they deserve to be classed with scrutinies, and contrasted with quests.

Perhaps one further minor point might be made. I said above that since the notion of care applies to tasks, all scrutinies must be in some degree either careful or careless. Yet in some contexts 'a careless examination' can sound like a self-contradiction; it can sound almost as absurd as, for example, in the opposite way, 'carefully gaping' does. This is simply because we use 'examining' and other scrutiny words in two ways. Frequently they are used in the way I have described so far, that is, without any hint whether the scrutiny was careful, painstaking and methodical, or not. But they are also sometimes used with the implication that care has been taken, and then it becomes perfectly intelligible to say 'Examining carelessly isn't really examining at all', or 'I was looking at it, but I'd hardly say I was scrutinizing it'. Incidentally, too, the same dual use occurs with quest verbs, *e.g.* 'Yes, he was looking about for it, but you could hardly say he was searching for it'.

7. Finally, perhaps one more note should be added about the verb 'look'. Ryle talks about 'looking' without specifying either 'looking for' or 'looking at'. Guessing from the context, I have assumed that in some places, as when he refers to 'looking and seeing', he really has 'look for' in mind, and that in others, as when he groups 'looking' along with 'observing' and 'probing', he is probably thinking of 'looking at'. I have also supposed, since he makes no explicit distinction and since it seems implicit in much that he says, that he mistakenly carries over remarks that apply to one of the two categories and assumes they are equally pertinent to the other.

Be this as it may, since the verb 'look', unqualified by either 'at' or 'for', has come under notice, it is worth adding some brief remarks about its uses. Of course, it is often used elliptically instead of 'look for' or 'look at', as in 'I'm looking at the picture. Are you looking too?' But there are several other uses where this is not so. For instance, (*a*) the doctor who wants to examine the back of someone's head may say 'I want you to look over there'. 'To look' here means simply 'to face', and concerns only the turn of the head. The instruction can be obeyed with eyes open or shut. (*b*) The oculist, examining a person's eyes from the side, may also say 'I want you to look over there'. This time, following the instruction requires the eyes to be open, though position of the head is also involved. On the other hand, provided the eyes are open, no attention is required. One may be blankly gazing, unseeing, in a brown

study. (*c*) Sometimes we are just looking or gazing out of the window, not blankly or unseeingly, but with some degree of attention. Yet, as in the two previous cases, we might deny, if asked, that we are looking *at* anything. We might hardly know even what objects we had seen, what our gaze had rested on, without making some considerable effort to recall. But this time we would be denying it, not because, as in (*b*), we might have been oblivious to everything about us, but because there was no one particular object or group of objects we were giving our attention to or focusing on. This 'looking' is very close to the 'merely watching' or 'merely looking at' discussed already. They are neither of them tasks, nor can they be careful or careless, etc. But they are distinguishable; for though I am not engaged in any task when I am 'merely watching' the children outside the window, I am looking *at* them and they are the main focus of whatever degree of attention I am giving. If asked, I can certainly report, without hesitation, both that I was looking *at* something, and what it was. 'Just looking out of the window' on the other hand need not be looking *at* anything.

Achievements and Retentions

So far in this paper I have tried to show that, by not treating 'look for' and 'look at' separately, Ryle jumbles together concepts of two different types. I have further suggested that his 'achievement' category contains at least two kinds of concepts, the 'completion' kind and the 'success' kind. Once these two confusions are made, it is easy to fall into supposing that 'see', which in its achievement sense certainly may indicate the success of seeking or looking for, signifies likewise the "corresponding success" of visual tasks like observing, looking at and scrutinizing. But this supposition is false, first because scrutinies have no typical successes corresponding to them in the way quests have, secondly because 'see' in its achievement sense is of the 'success', not of the 'completion' type. Hence seeing is not related to scrutinizing by the relation of success to task. However, before I go on to discuss seeing, I want to examine a further issue concerning achievements.

Ryle describes achievements as the upshots or outcomes or results of certain task performances which (except when there are lucky accidents) have preceded them. He also points out that achievements differ in kind, that "Some words of this class signify more or less sudden climaxes or dénouements; others

signify more or less protracted proceedings" (149), and that these latter may last "throughout a long span of time" (149). But there is much more to be said about protracted achievements, for they are very easily confused with the quite different class of episodes which I shall call 'retentions'. In fact, I think Ryle has so confused them.

If we were to seek examples of sudden achievements in accordance with Ryle's brief description, we would look for achievements, culminations and successes which occurred at a more or less precise and ascertainable moment. 'The race was won 10·4 seconds after it started', 'He achieved his two ambitions, to be knighted and to live to his eightieth birthday' and 'His aim was to spot the first plane over the horizon, which he did at 08.53 hrs.' are all suitable examples. They are the kinds of achievements clockable with stop-watches, photo-finishes, or at least by a definite date on a calendar. On the other hand, if we look for examples of protracted achievements, we need cases where, though some rough period can be mentioned within which the success was achieved, no precise moment, whether second, minute or day, can be singled out as *the* moment of the achievement. Typical illustrations would be 'His aim was to reach a ripe old age, and he did', 'He hoped for, and found, contentment in his declining years' and 'After much effort he succeeded in reaching a place of eminence in his profession'. With these protracted and unclockable events, a moment or date may be given when the goal has certainly not yet been reached, and another when it certainly has; but it is impossible to come any closer to an exact moment within that period. There is no exact moment at which it happened.

If we were setting out to differentiate sudden from protracted achievements, these are the sorts of illustrations we would expect. However, the examples Ryle gives as instances of protracted achievements are very few, and in fact illustrate a quite different logical category. Few, if any, true examples of protracted achievements are to be found in *The Concept of Mind*. Ryle's main example is 'keeping it in view', and to this he adds that "the secret may be kept, the enemy held at bay, or the lead be retained, *throughout a long span of time*" (my italics). But these do not illustrate protracted achievements at all. They illustrate the logical category I am labelling 'retentions'.

The differences between protracted achievements and retentions can be clearly exhibited, though it is not hard to see how they come to be confused. In the first place, protracted achievements are (or may be) genuine culminations, even though

unclockable ones, of tasks or activities like seeking and aiming at. Retentions, on the contrary, are not merely culminations or outcomes or typical successes of such task activities at all; as a matter of fact they are themselves tasks of a sort. This can be emphasized in several ways. Looking for the snake is one thing, finding or spotting it is the successful end of looking, and keeping it in sight is something you do *afterwards*. Similarly with 'he took the lead and kept it' or 'he acquired a high reputation in his profession and retained it till his death'.

Secondly, retentions presuppose prior achievements at least to the extent that scrutinies do (that is, with the reservations already made on page 457), and so cannot themselves be achievements, either sudden or protracted. 'He kept it in sight from ten o'clock till five minutes past' entails that, at ten o'clock or before, he either caught sight of or spotted it (sudden achievement), or else gradually made it out, discerned it in the mist, or some such thing (protracted achievement). Whether the achievement was sudden or protracted, deliberate or accidental, the retention must have been preceded by it and was distinct from it. In short, keeping a title is not itself a kind of winning; and retaining the lead is not the same as taking the lead, though whoever retains it must have taken it, whether by accident or by effort and competition. It is worthy of notice too that one can succeed, yet fail to retain, *e.g.* 'He tried to seize the snake, caught hold of it, but was unable to retain his hold on it even for a second'.

Thirdly, the notion of 'duration' or 'protractedness' is different in the two cases. Ryle's expression which I italicized above, 'throughout a long span of time', is ambiguous. With protracted achievements, it means that success came between such and such times or dates, even though, between those times, there was no specifiable or clockable moment at which it could be said to come. At one moment success had definitely not yet come, and by some later moment it had. This is surely implied in Ryle's contrasting account of sudden achievements as occurring "at a *specifiable* instant" (149) (my italics). But with retentions, and with Ryle's examples, a second interpretation is needed. If I keep the lead for ten minutes, the keeping or retaining is not something that comes to fruition sometime within the ten minutes but for which no exact time, other than extreme limits, can be given; it is something lasting all the while and going on the same at every moment between the two specified limits. Protracted achievements have no beginnings or endings for they are themselves, unlike retentions, protracted or drawn-out endings. The fact that 'duration' and 'long-lasting' mean

something different in the two cases also explains why, whereas every retention must have some, even if a very short, duration, there can be 'sudden' achievements which have no duration at all. There could not be a retention that lasted no time at all.

Fourthly, and as a result, the notion of success applies differently. It is equally true both that one cannot win, find, glimpse or attain unsuccessfully, and also that one cannot retain or keep something in sight unsuccessfully. Undoubtedly this fact, that both achievements and retentions are logically incapable of failure, has been one of the main reasons for confusing them, and it is easy to see how a label like 'protracted achievements' could be applied to both categories. But they are different even so. If a runner keeps the lead for three minutes, or if I keep my grip on the snake for thirty seconds, something is being done, some task carried out with success, at all times throughout the period; no failure occurs at any moment. Failing to retain would mean ceasing to retain; but as long as retention continues, it is all the while both a success and an activity. Holding on for dear life is no less of an activity for the fact that, while it is being done, it is always being done successfully. On the contrary, the protracted success which consists in gradually making out a form in the mist, or attaining fame or political wisdom between two limiting times or dates, is not a task or activity to which the adverb 'successfully' applies at every moment throughout the period. For attaining is not an activity at all, but the success or outcome of some kind of activity.

Fifthly, and closely connected, is the different way the notion of effort applies. Achievements, as such, and as Ryle makes plain, require no effort. They crown other effortful activities. So protracted achievements, as such, require no effort either. As long as the effort is still continuing, success has not yet been really or fully gained; and when it is gained, that effort is over. But retentions are frequently arduous and demand continued effort, not an effort aimed at a future result or culmination, but an effort to hold on to what was gained in the past.

It is clear then that protracted achievements are not retentions; but clear also why it was easy to confuse the two categories, even to the extent of giving typical retention verbs as examples of protracted achievements. (*a*) Both retentions and achievements may follow upon seekings; but whereas retentions are further activities that may follow, achievements are the culminations of the earlier activities. Achieving may follow upon seeking, but retaining follows both. (*b*) Duration, success and perhaps effort (as in the similar-looking sentences 'he made great efforts

to achieve' and 'he made great efforts to retain') appear to apply equally to both concepts; but they all apply in different ways or senses. The fact is that, in spite of many apparent similarities, retention verbs form a special or distinct group of task verbs, unlike either quest verbs or scrutiny verbs in many ways, and certainly unlike any kind of achievement verb.

Seeing

1. So far, I have separated out the concepts of seeking, scrutinizing, achieving and retaining, and suggested some of the relationships which may hold between them. What follows is a partial examination of some uses of the verb 'see' (and, by implication, of other perception verbs like 'hear' as well).

A reading of some sections of *The Concept of Mind* leaves the impression that many, though not all, of the traditional problems concerned with seeing, hearing, etc., arise from mistakes about the logic of the verbs 'see' and 'hear'. It is suggested and emphasized again and again throughout the book that, whereas seeing and hearing have often been thought of as mental, private, or hidden activities or processes, they are, in reality, not activities at all, but achievements or triumphs in which activities may culminate. If they are not activities or goings-on, then, *a fortiori*, they are not hidden or private or mental goings-on. The verbs signify the moments and manners of culmination of such public and witnessable activities as looking for and listening for. There is something about this line of argument that gives temporary satisfaction, for it may well be true that 'he heard it', 'I see it' and the like are frequently used in an achievement sense. However, I think it is clear that the verbs 'see' and 'hear' are not always or exclusively used in achievement senses. They are used in a number of other ways which Ryle either overlooks or at least fails to discuss. This explains why the line of argument suggested above does not satisfy for long.

One reason for focusing too exclusively on the achievement use of 'see' has already been indicated. The confusions discussed in the first part of this paper lead smoothly to the conclusion that the role which 'see' plays in relation to observations and scrutinies is an achievement one. It is then easily supposed that the main function of 'see' in connection with visual activities has been accounted for. It escapes notice that seeing, in this 'spotting' sense, precedes observing, and is over and done with by the time observation or scrutiny is under way. As a result, too, it easily escapes remark that, when we are observing or

scrutinizing, there is another use of 'see' which is not over and done with and which needs to be accounted for. This is quite certainly not an achievement use.

The sense of 'see' I have in mind is that in which, to look at or scrutinize an object for a given length of time, one must *throughout that length of time* be seeing it. I cannot scrutinize something unless I can, at the time, actually see it (though of course I may see it without scrutinizing it). If for any period of time I am unable to see the object in question, for that length of time I cannot scrutinize or examine it. If 'he is now watching it' is true, 'he can now see it' must also be true. So here is at least one use of 'see' which is clearly different from the achievement or spotting use and which needs further discussion. (I have been prepared to grant, for the purposes of this article, that 'see' is sometimes an achievement verb. It might be questioned whether even this much is true. There may be some visual achievement verbs; perhaps 'descry', 'spot' and 'espy' are examples. But surely it would be hard to find an occasion where someone who had looked for and suddenly seen something would reject the question 'Did you see it for long?' as an absurd one. Yet strictly, if 'see' is ever an achievement verb, it should be possible to find such occasions.)

The things to notice about this non-achievement use of 'see', then, are the following. First, seeing follows upon and presupposes the prior occurrence of a spotting or seeing of either the sudden or protracted achievement kind. In this respect it is similar both to scrutinizing and to keeping in sight. Secondly, seeing, in this sense, lasts through time; duration phrases like 'for a long time' or 'for five minutes' can apply to it. So once again it is distinguished from the sudden achievement use of 'see'; and since the notion of duration which applies is, as with retention and scrutiny verbs, the notion of lasting throughout a period, it is also distinguished from protracted achievements. When we say 'he could see it uninterruptedly from 2 p.m. until 2.10 p.m.', we are saying that something began at 2 p.m. and lasted for 10 minutes; we are not saying that these two times are limits within which something that cannot be any more exactly dated occurred. Thirdly, seeing is a precondition of scrutinizing and hence not itself a kind of scrutinizing. In this respect, the retention notion, 'keeping in sight', has a close affinity with seeing. You cannot scrutinize an object unless you can see it or unless you keep it in sight; so retentions also are often presupposed by scrutinies. In a number of respects then, 'seeing X' is very much like the retention, 'keeping X in

sight', for they both differ from, and are related to, activities like seeking, spotting, and scrutinizing in much the same way.

Despite these many similarities, however, seeing is certainly not to be classified as a 'retention'. Though seeing and keeping in sight are similarly related to scrutinies, they are not identically related; for whereas it is often, but not always, the case that one has to keep an object in sight in order to be able to scrutinize it, it is without exception always the case that one must be able to *see* an object in order to scrutinize it. This shift from 'often' to 'always' is an indication of an important difference. Someone chasing a rabbit or a mosquito, or watching the activities and movements of an ant in the grass or a plane in the distance, must manage, if he is to continue to watch or otherwise scrutinize the object, to keep it in sight. These are all cases where effort is needed, where the object is elusive, small, retreating, or fast-moving, where the medium is fluctuating, full of obstacles, or otherwise not at its best, where, in short, there is a chance of the object hiding, or escaping, or of our losing it. But if I am examining something which is motionless and in plain view in front of me, if I spend five minutes, say, on a clear day looking carefully at the nearby mountains, it must certainly be true, for as long as I am looking at or scrutinizing them, that I can see them. Yet we would hardly say that I was keeping them in sight; they are not likely to hide or move away.

What I am suggesting, in effect, is that the main difference between 'keeping in sight' and 'seeing' is one of effort, or difficulty, or purposefulness, or task-activity. It is like the difference between keeping the lead and merely being ahead. Being ahead, having the lead, and enjoying a reputation may need no effort; they are not *doing* anything. *Keeping* ahead or *guarding* a reputation imply effort or watchfulness, and may demand strong measures. They are something one *does*. It might be said, in fact, that a retention verb like 'keep in sight' is an effort-implying or active form of the effortless (or non-committal) 'can see' form. That this is so can be proved by the fact that we can usually paraphrase 'he kept it in sight' by, for example, 'he did what was necessary (turned his head, moved round, ran, pursued, dodged) to ensure that he might continue to see it'. This explains why, as I said, scrutinizing or looking at an object always and necessarily involves seeing the object, but only sometimes (*e.g.* when the object is moving or elusive) involves the effortful activity of keeping it in sight. If this is so, 'keeping it in sight' is, one might say, simply a logically more

complex version of 'seeing it'; for while it includes the notion of seeing—anyone keeping the moving object in sight can, *a fortiori*, still see it—it also includes the notion of successfully doing something, unspecified, in order to continue seeing it. Hence, the logical features of the two concepts and their relations to other concepts are in part very similar, as we have noticed; but because of its extra complexity, there are additional features that apply to the one but not to the other. Keeping it in sight is a task or activity, something one does, sets oneself to, or engages in. It can be done skilfully, carefully, resolutely, doggedly, with all one's strength and with great effort and expenditure of energy. None of this is true of simply seeing something. We might almost call 'see' a verb of 'having' or 'possession' to contrast it with verbs of 'keeping' or 'retention'. About certain other verbs in another context Ryle says, "they do not directly report gettings, but something nearer akin to possession" (303). Replace 'gettings' by 'keepings', and his remark would apply to perception verbs and exactly fit the present case.

2. It will be noticed that, in illustrating this use of 'see', I have, following normal English practice, frequently used 'can see' or 'could see', rather than simply 'see' or 'saw'. Since 'can' and 'could' are often the hall-marks of potentialities, abilities, or dispositions, rather than of actual occurrences or happenings, it might be supposed or argued that what I am discussing is merely a dispositional use. One thing seems plain however. If we had to classify the use of the sentence 'he could see it clearly for ten whole minutes' by means of a simple dichotomy, we should have to choose 'occurrence' or 'happening' or 'exercise of an ability', rather than 'potentiality' or 'disposition' or 'ability'. So the use of 'can' or 'could' is not in this case (or in the case of other perception verbs like 'hear', 'smell' and 'taste') concerned merely with statements about unactualized dispositions or unexercised abilities. Indeed it seems to be a peculiarity of certain languages only, among which English is one and German another, to use 'can' or its equivalent with non-dispositional uses of perception verbs. In other languages, a simple present or past tense of the verb 'to see' seems to be either the only or the most usual way of expressing the occurrence sense. For instance, we translate 'I can still see it over there' by '*Je le vois . . .*' (not by '*Je peux le voir . . .*' which regularly connotes mere possibility); and in Spanish, although '*ver*' is sometimes used with '*poder*', it is much more frequently used without. What is more, even in

English, especially when we are emphasizing that the verb is not to be understood in a merely dispositional sense, we sometimes omit the 'can' and 'could'. The following scraps of conversation are not grammatically abnormal, and certainly do not deal only with abilities: 'Did you see it?—Yes, I saw it for about five minutes without interruption'; 'I don't believe you can see it now or that you ever have seen it.—On the contrary, I actually see it at this very moment and have been seeing it for the last two minutes'; 'I have thee not, and yet I see thee still'. However, it is not the peculiarities and modes of expression of this or that language that interest us here; it is the kind of use to which certain expressions are put, no matter what their language, their grammatical construction, or their verbal characteristics. As the use of 'see' or 'can see' that we are considering is quite certainly not a dispositional use, its grammatical appearance need not worry us.

Two warnings are needed here. (*a*) When I say that the use of 'see' or 'can see' under discussion is concerned with the exercise of an ability, not merely with an ability, it must not be supposed that I am asserting that the same verbal expressions are never used in a dispositional sense. They quite obviously are used in both ways. 'We could see the sea from our window' and 'He can see the river from his house' may tell of possibilities. In many contexts it would be absurd to retort, for example, 'He can't, because he's not even in his house at the moment', or 'But he's asleep at the moment, so of course he can't'. Yet the same form of words, 'We could see the sea' and 'He can see the river', may, in another context, report a visual occurrence, and may be queried by, *e.g.* 'But you were looking the other way all the time', or 'But his eyes are closed'. (*b*) I am not saying that the dichotomy 'disposition or occurrence' is in fact exhaustive. In maintaining that the use of 'see' under discussion is not a dispositional one I am not claiming that, when someone sees, he is engaged in an 'activity', or that anything is 'going on'. Perhaps even the expression 'occurrence use' is objectionable or a misnomer. However, I shall continue to use it with the understanding that it serves to contrast this use of 'see' with the obviously dispositional use already described.

3. I argued above that the verb 'see', which I there characterized for purposes of contrast as a verb of 'possession' or 'having', cannot be qualified by adverbs of effort. Certain additional remarks ought perhaps to be made in this connexion. We often employ the verb 'see', amongst others, without any

grammatical object. This happens both with the occurrence use, as in 'When I open my eyes I can see', and with the dispositional use, as in 'Of course John can see, but he's asleep at the moment' (where 'can see' has the force of 'is not blind'). In these cases the omission of a grammatical object is not a mere ellipsis by which reference to a known specific object is omitted, as in 'I want you to look at the blackboard. Can you see?' On the contrary, no object is mentioned because there is no specific object in question. The man whose cataract has been removed, when asked after the operation 'Can you see?', does not counter with 'Can I see what?' We are enquiring about his eyesight; we were not enquiring about eyesight when we asked 'Can you see?' in the blackboard example. Thus we employ 'see' without a specified object when we are concerned with seeing for its own sake, without taking any interest in, or making any reference to, what is seen. If any grammatical object had to be supplied, it would be, depending on circumstances, an expression like 'anything', 'something or other', or 'whatever is there to be seen'.

I hesitate to say that the verb is used in different senses in the two sentences 'I can see' and 'I can see it (the blackboard, etc.)'. What is certain is that the emphasis and purpose of the two remarks would be very different; one stresses visual capacities and performances, the other the presence or the discovery of an object. Because of this, there are numerous conditions that may need to be fulfilled before you may justly claim that you can actually see some specified object or other, and, conversely, numerous reasons why you may fail to see it. You will see it 'if you turn round', 'if it is there today', 'if there are no intervening obstacles', 'if the light is good and there is no mist', 'if you are facing due south', and so on. When no specific object is in question, but only whether you can see or not, these and similar conditions are irrelevant. In particular, and this is why I introduce the issue here, making an effort or trying is something which is never relevant to seeing as such. We do of course use sentences like 'he made great efforts to see what his rival was doing' and 'he tried to see the whole procession'. But in all such cases there is a specific object involved, and the trying or resolving is concerned with getting into, or staying in, a position from which one can see that object. In trying to see the procession we may need to climb the building and crane our necks past the chimney pots or the gargoyles; there the trying ends. Once we are in position, with our eyes open, seeing is effortless, or more strictly neither

effortful nor effortless. It is neither difficult nor easy ; it simply occurs. So when seeing alone, and not a specific object, is in question, effort is not either appropriate or possible. Nothing is to be gained by exhorting someone to try to see ; if people are awake and their eyes are open, either they see, or else they are blind from some cause and do not.

One final point. Whether or not we should think of the use of ' see ' with a specific object and the use of ' see ' without an object as two distinct senses of the verb, the following statements are true. Whenever it happens that I can see a particular object, say, the blackboard, it is true *a fortiori* that I can see, but the converse is not necessarily true. What is more, not only is ' I can now see ' entailed by ' I can now see it ' and hence also in turn by ' I am keeping it in sight ' and ' I am looking at or scrutinizing it ' (all of which follow upon the spotting of the object) ; ' I can now see ' is entailed, in addition, by ' I see it ' (in the spotting or achievement sense), and even by ' I am looking for or seeking it ' (which occurs before the spotting of the object). Thus, the occurrence use of ' see ' without a specific object underlies visual scrutinies, retentions, achievements and quests. It seems to be the most fundamental use of ' see ', and is involved in all the other visual concepts already discussed.

Summary

I shall now sum up briefly. By distinguishing ' looking for ' from ' looking at ', we are forced to notice that perception verbs, like ' see ', have other functions besides indicating achievements. Among those other functions, some at least deal with ' happenings ' or ' occurrences ', that is, they signify the exercise, for a period of time, of an ability, not merely the possession of an ability. Further, when the differences between retentions and protracted achievements are pointed out, we are able to see how the use of an expression like ' keeping it in sight ' is related to one of these occurrence uses of ' see '. The removal of the erroneous view that perception verbs are mainly achievement verbs, and the directing of attention to their occurrence uses, clears the way for further discussion of the logic of seeing. I have in fact indicated some of the logical features of seeing and some of the relations which hold between it and other visual concepts. But much still remains to be said. In particular, the conclusion that seeing is not an activity (and hence not a mental activity), which was founded upon the contention that perception verbs are a type of achievement verbs, can no longer

be upheld on those grounds. The issue, therefore, whether seeing is or is not describable as an activity needs to be reargued with reference to the occurrence uses of perception verbs. But that is not possible here.

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III.—CAUSATION AND RECIPES

By Douglas Gasking

We sometimes speak of one thing, or of one sort of thing, causing another—of the second as being the result of or due to the former. In what circumstances do we do so?

If we start with some typical statements of causal connection—"The train-smash was due to a buckled rail"; "Vitamin B deficiency causes beri-beri"—two things are likely to strike us. First, the effect is something that comes into being after the cause, and secondly, we suppose that anyone fully conversant with the circumstances and the relevant causal laws could, from a knowledge of the cause, predict the effect. So it is very natural to suggest, as an answer to our question: We say that A causes B whenever a person with the requisite empirical information could infer from the occurrence of A to the subsequent occurrence of B. Or we might put it: We say that A causes B whenever B regularly follows A.

But this "regular succession" notion will not do. For there are cases where we would speak of A causing B where it is not the case that from the occurrence of A we may infer the subsequent occurrence of B.

An example to illustrate this: Iron begins to glow when its temperature reaches a certain point. I do not know what that temperature is: for the sake of the illustration I will suppose it to be 1,000°C., and will assume that iron never glows except at or above this temperature. Now, if someone saw a bar of iron glowing and, being quite ignorant of the physical facts, asked: "What makes that iron glow? What causes it to glow?" we should answer: "It is glowing because it is at a temperature of 1,000°C. or more." The glowing, B, is caused by the high temperature, A. And here the B that is caused is not an event subsequent to the cause A. Iron reaches 1,000°C. and begins glowing at the same instant. Another example: current from a battery is flowing through a variable resistance, and we have a voltmeter connected to the two poles of the battery to measure the potential difference. Its reading is steady. We now turn the knob of our variable resistance and immediately the voltmeter shows that the potential difference has increased. If someone now asks: What caused this increase?, we reply: "the increase of the resistance in the circuit". But here again the effect was not something subsequent to the cause, but simultaneous.

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So perhaps our account should be emended so as to read : We speak of A as causing B when the occurrence of B may be inferred from the occurrence of A and the occurence of B is either subsequent to or simultaneous with the occurrence of A.

But this will not do either, For there are, first of all, cases where from the occurrence of A we may infer the subsequent occurrence of B, yet would not speak of A as causing B. And secondly there are cases where from the occurrence of A we may infer the simultaneous occurrence of B, yet would not speak of A as causing B.

Here is an example of the first case. Given (A) that at t_1 a body freely falling *in vacuo* is moving at a speed of 32 feet per second we can infer (B) that at t_2, one second later, it will be moving at 64 feet per second. We might be prepared to say that this inference was in some sense or other a causal inference. But it would be a most unnatural and 'strained' use of the word 'cause' to say that the body's movement at 64 feet per second at t_2 was caused by its moving at 32 feet per second at t_1. It would be even more unnatural, to take a famous example, to say that the day that will be here in twelve hours' time is caused by the fact that it is now night. Yet from the present fact we can certainly infer that in twelve hours' time it will be day.

An example to illustrate the second point. From the fact that a bar of iron is now glowing we can certainly infer (and it will be a causal inference) that it is now at a temperature of 1,000°C. or over. Yet we should not say that its high temperature was caused by the glowing : we say that the high temperature causes the glowing, not *vice-versa*. Another example : watching the voltmeter and battery in the electrical circuit previously described we see that the needle suddenly jumps, showing that the potential difference has suddenly increased. From this we infer that the electrical resistance of the circuit has, at that moment, increased. But we should not say that the rise in potential difference caused the increase in resistance : rather that the rise in resistance caused a rise in the potential difference. Or again, knowing the properties of a certain sort of wax, we infer from the fact that the wax has melted that, at that very moment, it reached such and such a temperature. Yet we should not say that the wax's melting caused it to reach the critical temperature : rather that its reaching that temperature caused it to melt. Why do we speak of 'cause' in some cases in which we can infer from A to B, but not in others ?

The reason is not always of the same sort. Sometimes in such a case it would be nonsense to speak of A causing B, sometimes it

would merely be false. Our very last example is a rather trivial instance of the first sort of reason. It is nonsense to speak of the melting of the wax causing the high temperature of the wax because "x melts" means "high temperature causes x to become liquid". So "the melting of the wax caused the high-temperature of the wax" is equivalent to the absurdity "The high temperature of the wax's causing of the wax to become liquid caused the high temperature of the wax".

But it is not for this sort of reason that we do not say that the glowing of the iron causes the high temperature of the iron. "Melting" is by definition an effect and not a cause of an increase in temperature, but the same is not true of "glowing". It is not logically absurd to say that the glowing of a piece of iron causes its high temperature; it is merely untrue. It is possible to imagine and to describe a world in which it would have been true. Here is an account of such an imaginary world.

"Our early ancestors many millennia ago discovered that you could make a large range of substances (wood, water, leaves, etc.) glow first blue, then purple, then red by a process of alternately covering them so as to exclude light, then rapidly letting light fall on them, then quickly covering them again, and so on. Wood, for instance, starts glowing after about six minutes of this treatment, and reaches the red stage in about ten minutes. If it is then left in constant daylight or in constant darkness it gradually fades through purple to blue and then ceases glowing. A number of other substances behave similarly, though the time needed to produce the glowing effect differs somewhat from substance to substance. None of the things that early man thus learnt to make glow, however, suffered any change of temperature in the process. Then, about 1000 B.C. men got hold of samples of fairly pure iron, for the first time. They tried the covering-uncovering technique on it to see if it too, like wood and water, but unlike certain sorts of rock, would glow if manipulated in this way. They found that it would, but that, unlike other substances, iron began to get hot when it started glowing, got hotter still at the purple stage, and when glowing red was very hot indeed. Precise measurements in modern times showed that on reaching the red stage the temperature of iron was 1,000°C. In other respects this imaginary world is just like our world, except that when you put a poker or other non-combustible object in a fire it does not begin to glow, however hot it gets."

Who can doubt that in this imaginary world we should have said that the glowing of the iron caused its temperature to rise, and not *vice-versa*? What, then, are the essential differences

between this world and ours, which would lead us to say one thing in one world and another in another ?

Human beings can make bodily movements. They do not move their arms, fingers, mouths and so on by doing anything else ; they just move them. By making bodily movements men can manipulate things : can lift them, hold them in certain positions, squeeze them, pull them, rub them against each other, and so on. Men discovered that whenever they manipulated certain things in certain ways in certain conditions certain things happened. When you hold a stone in your hand and make certain complex movements of arm and fingers the stone sails through the air approximately in a parabola. When you manipulate two bits of wood and some dry grass for a long time in a certain way the grass catches fire. When you squeeze an egg, it breaks. When you put a stone in the fire it gets hot. Thus men found out how to produce certain effects by manipulating things in certain ways : how to make an egg break, how to make a stone hot, how to make dry grass catch fire, and so on.

We have a general manipulative technique for making anything hot : we put it on a fire. We find that when we manipulate certain things in this way, such as water in a vessel, it gets hot but does not begin to glow. But we find, too, that certain other things, such as bars of iron, when manipulated in this way do not only get hot, they also, after a while, start to glow. And we have no general manipulative technique for making things glow : the only way to make iron glow is to apply to it the general technique for making things hot. We speak of making iron glow by making it hot, *i.e.* by applying to it the usual manipulative technique for making things hot, namely, putting on a fire, which in this special case, also makes it glow. We do not speak of making iron hot by making it glow, for we have no general manipulative technique for making things glow. And we say that the high temperature causes the glowing, not *vice-versa*.

In our imaginary world there is a general manipulative technique for making things glow—namely, rapidly alternating exposure to light and shielding from light. There is no other way of making them glow. In general, things manipulated in this way glow, but do not get hot. Iron, however, glows and gets hot. In this world we speak of making iron hot by making it glow, *i.e.* by applying to it the usual manipulative technique for making things glow which, in this special case, also makes it hot. We do not speak of making iron glow by making it hot, for the general manipulative technique of putting things on fires, which makes them hot, does not, in this world, also make things glow.

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And in this world, we should say that the glowing causes the high temperature, not *vice-versa*.

What this example shows is the following: When we have a general manipulative technique which results in a certain sort of event A, we speak of producing A by this technique. (Heating things by putting them on a fire.) When in certain cases application of the general technique for producing A also results in B we speak of producing B by producing A. (Making iron glow by heating it.) And in such a case we speak of A causing B, but not *vice-versa*. Thus the notion of causation is essentially connected with our manipulative techniques for producing results. Roughly speaking: "A rise in the temperature of iron causes it to glow" means "By applying to iron the general technique for making things hot you will also, in this case, make it glow". And "The glowing of iron causes its temperature to rise" means "By applying to iron the general technique for making things glow you will also, in this case, make it hot". This latter statement is, as it happens, false, for there is no general technique for making things glow, let alone one which, applied to iron, also makes it hot.

Thus a statement about the cause of something is very closely connected with a recipe for producing it or for preventing it. It is not exactly the same, however. One often makes a remark of the form "A causes B" with the practical aim of telling someone how to produce or prevent B, but not always. Sometimes one wishes to make a theoretical point. And one can sometimes properly say of some particular happening, A, that it caused some other particular event, B, even when no-one could have produced A, by manipulation, as a means of producing B. For example, one may say that the rise in mean sea-level at a certain geological epoch was due to the melting of the Polar ice-cap. But when one can properly say this sort of thing it is always the case that people can produce events of the first sort as a means to producing events of the second sort. For example, one can melt ice in order to raise the level of water in a certain area. We could come rather closer to the meaning of "A causes B" if we said: "Events of the B sort can be produced by means of producing events of the A sort."

This account fits in with the principle that an event, A, at time t_2 cannot be the cause of an event B at an earlier time, t_1. It is a logical truth that one cannot alter the past. One cannot, therefore, by manipulations at t_2 which produce A at t_2 also produce B retrospectively at t_1.

Let us turn now to the cases where, although from a state of

affairs A we can infer a later state of affairs B, we nevertheless would not say that A causes B ; *e.g.* to the case where from the speed of a freely falling body at t_1 we can infer its speed at t_2, or infer coming darkness from present daylight. These are cases where a process is taking place whose law we know, so that we can infer from one stage in the process a later stage. Our inference presupposes that nothing happens to interfere with the process ; the falling body will not encounter an obstruction, the earth's spinning will not be stopped by, say, our sun becoming a super-nova. The difference between the earth's spinning and the body's falling is that in the latter case we can set the process going and arrange that nothing shall thereafter interfere with it for a certain time ; in the former case we cannot. It is the same sort of difference as there is between melting ice in a bucket and the water-level rising in the bucket and melting Polar ice-caps and sea-level rising. We cannot set the earth spinning, but we can set a top spinning.

Imagine a world in which there is an exact correlation between the colour and the temperature of everything. Anything at a certain low temperature is a certain shade of, say, blue. If an object becomes warmer its colour changes to purple, then red, then orange, then yellow and finally to white. Cold (or blue) objects can be made hot (or red) by putting them in a fire ; after a long time in a very big fire they become very hot (yellow). In such a world we should very probably not have had two sets of words : " cold ", " warm ", " hot ", " very hot " and also " blue ", " purple ", " red ", " yellow "—but only one set—say the words " blue ", " purple ", " red ", and so on. We should have spoken of things " looking purple ", or " being purple to the eyes " and of their " feeling purple " or " being purple to the touch ". (In our actual world we talk of things being round or square whether we apprehend their shapes by the eye or by the touch : we do not have a special word meaning " round to the eye " and another quite different word meaning " round to the touch ", since there is a correlation between these.)

In such a world we should speak of making purple things red by putting them on a fire, but should not normally speak of making something " red to the eye " (*i.e.* what we mean by " red ") by putting it on a fire ; nor of making something " red to the touch " (*i.e.* what we mean by " hot ") by this method. Still less should we speak of making something " red to the eye " by making it " red to the touch ", or of making it " red to the touch " by making it " red to the eye ". (In our actual world we do not speak of making things " visibly round " by making them

" tangibly round ", nor *vice versa*.) When a single manipulation on our part invariably produces two effects A and B, we do not speak of producing one by producing the other, nor do we speak of one as a cause of the other. (The visible roundness is neither cause nor effect of the tangible roundness of a penny.) It is only when we have a technique for producing A which in some circumstances but not in all also produces B that we speak of producing B by producing A, and speak of A as causing B.

When we set a process going—drop a stone from a tower, set a top spinning—we set the stage, see that nothing shall interfere (for a certain time at least) with the process we are about to start, and then set things going. After that, things take their own course without further intervention on our part—the stone gathers speed, the top loses it. There are successive stages in the process. At stage A at t_1 the stone is moving fairly fast, at a later stage B at t_2 the stone is going very fast. But, on the presupposition that the process continues undisturbed, the very same initial stage-setting and send-off, C, which will produce fairly fast motion at t_1 (A), will always produce very fast motion at t_2 (B), and the initial stage-setting and send-off C which will produce very fast motion at t_2 (B) will always produce fairly fast motion at t_1 (A). That is, the process being undisturbed, an initial send-off C will always produce both A and B : there is not a general technique for producing A which in some circumstances also produces B. Hence we do not speak of producing B by producing A. There is not a general technique for bringing it about that, one second after the start, a stone is falling at 32 feet per second, which in some circumstances can also be used to bring it about that two seconds after the start it is falling at 64 feet per second. Hence we do not speak of achieving the latter by means of the former, and do not speak of the former as causing the latter.

Of course one could, by attaching a rocket to the falling body, which fires one second after the start, secure that a body which is moving at 32 feet per second one second after departure is one second later travelling much faster then 64 feet per second. But this would contradict our presupposition that the process, after being started, was left uninterfered with. It is on this presupposition only that C always produces both A and B.

I have made two points :

First : that one says " A causes B " in cases where one could produce an event or state of the A sort as a means to producing one of the B sort. I have, that is, explained the " cause-effect " relation in terms of the " producing-by-means-of " relation.

Second : I have tried to give a general account of the producing-by-means-of relation itself : what it is to produce B by producing A. We learn by experience that whenever in certain conditions we manipulate objects in a certain way a certain change, A, occurs. Performing this manipulation is then called : " producing A ". We learn also that in certain special cases, or when certain additional conditions are also present, the manipulation in question also results in another sort of change, B. In these cases the manipulation is also called " producing B ", and, since it is in general the manipulation of producing A, in this case it is called " producing B by producing A ". For example, one makes iron glow by heating it. And I discussed two sorts of case where one does not speak of " producing B by producing A ". (1) Where the manipulation for producing A is the general technique for producing B, so that one cannot speak of " producing B by producing A " but only *vice-versa*. (2) Where the given manipulation invariably produces both A and B, so that the manipulation for producing B is not a special case only of that for producing A.

The notion of " cause " here elucidated is the fundamental or primitive one. It is not the property of scientists ; except for those whose work most directly bears on such things as engineering, agriculture or medicine, and who are naturally interested in helping their practical colleagues, scientists hardly ever make use of the notion. A statement about causes in the sense here outlined comes very near to being a recipe for producing or preventing certain effects. It is not simply an inference-licence. Professional scientists, when they are carefully stating their findings, mostly express themselves in functional laws, which are pure inference-licences, with nothing of the recipe about them (explicitly at least). Thus the formula $1 = \frac{E}{R}$ tells you how to infer the current in a given circuit, knowing the electro-motive force and the resistance ; it tells you how to infer the electro-motive force, knowing the resistance and current ; and how to infer the resistance from current and electro-motive force. All these three things it tells you ; and no one of them any more specially than any other—it works all ways, as an inference-licence. But while one might say a current of 3 amps. was caused by an e.m.f. of 6 volts across a resistance of 2 ohms, one would hardly say that a resistance of 2 ohms in the circuit was caused by an e.m.f. of 6 volts and a current of 3 amps. Why not ? Given an e.m.f. of 6 volts one could make 3 amps. flow by making the resistance equal to 2 ohms. But one could not, given an e.m.f. of 6 volts, make the

resistance of the circuit equal to 2 ohms by making a current of 3 amps. flow.

From one point of view the progress of natural science can be viewed as resulting from the substitution of pure inference-licences for recipes.

There is, however, what might be called a "popular science" use of "cause" which may not exactly fit the account given—a use of the word by laymen who know some science and by some scientists in their less strictly professional moments. I have in mind such a locution as "Gravity causes unsupported bodies to fall". Such a statement is not quite on a par, logically, with "Great heat causes steel to melt". It would be fair to say, I think, that the use of the word "cause" here is a sophisticated extension from its more primitive and fundamental meaning. It is the root notion that I have been concerned with.

In accounts of causation given by philosophers in the past a specially fundamental role was often played by the motion of bodies. Every kind of change and every kind of natural law was often supposed to be "ultimately reducible to" or to be explicable in terms of it. In this account, too, though in a rather different way, the motion of bodies occupies a special position. Central to this account is the notion of a manipulation to produce A and thereby to produce B. When we manipulate things we control the motion of bodies, *e.g.* by rubbing sticks together (motion of bodies) men made them hot and thereby caused them to ignite. At least all those causal chains that are initiated by human beings go back to manipulations, that is, to matter in motion.

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IV.—THE FUNDAMENTAL IDEAS OF PANSOMATISM[1]

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(Translated from the Polish by Alfred Tarski and David Rynin)

There exists at least one object, and every object is something corporeal or something sentient (or a whole consisting of such components).[2] An example of something corporeal is: a watch of the trademark Omega No. 3945614 from 1st January, 1934 to 31st December, 1934, inclusive (or any of its parts—for instance, the minute hand from 5th March, 1934 to 7th April, 1934, inclusive). And an example of something sentient: I, from 8 o'clock to 1 o'clock on 20th March, 1935 (or any temporal portion of this object, *e.g.* I, from 9 o'clock to 10 o'clock inclusive on the same day). Instead of "something corporeal" we shall say, more briefly, "a body"; instead of "something sentient"—"a soul". In view of this, every object is a body or a soul (or a combination of these components). Instead of "a body or a soul" we shall say, more briefly, "a thing", so that every object is a thing. Now, all those who believe that every object is a thing we call "reists"; speaking more loosely: the view that every object is a thing we call "reism". It is perhaps superfluous to add that the word "or" in the phrase "a body or a soul", and in similar passages above, plays the role of the symbol of non-exclusive disjunction (and not

[1] The original of this paper appeared under the title: "Zasadnicze myśli pansomatyzmu" in *Przegląd Filozoficzny*, vol. 38, 1935, pp. 283-294. Professor Kotarbiński kindly agreed to the publication of this translation although he did not have the opportunity of reading it. On his suggestion two minor additions to the original have been included in the first paragraph. Since a literal translation has sometimes been impossible (especially in passages referring to peculiarities of the Polish language), and in other places would be extremely awkward, the translators have taken the liberty of making slight verbal changes, doing their best not to alter the sense of the original. The translators express their thanks to Professor F. J. Whitfield for a critical reading of the translation, and for a number of useful suggestions.

[2] The term translated here as "sentient" will be translated in some later passages as "experiencing".

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of exclusive disjunction), forming the so-called "logical sum" of the terms connected by it, and hence not excluding the existence of an object which would be both a body and a soul. The term "corporeal" requires an explanation. "Corporeal", in our sense, means the same as "temporal, spatial, and resistant". And "spatial" means the same as "extending in length, breadth, and height". Whether there are objects "extending in other dimensions" we leave open. Both a stone and a living individual are resistant. No objects are "empty portions of space". Any portion of a magnetic field in a barometric vacuum is resistant, and not merely temporal and spatial. We are inclined to hold that everything which is in our sense corporeal is either (1) a gravitating solid (as an animal, a tree, a stone, a lake, a cloud, and so on), that is, a body in the usual sense of popular physics, or (2) a whole consisting of such solids (an example—the solar system, that is, the sun with its planets), or (3) an object of the kind of which such solids consist (for instance, a molecule, an atom, an electron, etc.), or finally, (4) a whole consisting of elements each of which belongs to one of the preceding three types. We could thus define the term "body", with regard to its logical extension, simply by means of the four-member alternative above, which, be it noted, is not exclusive.

Since every object is a thing, and since, therefore, only things exist, it is not the case that any object is a property, or a relation, or a fact (a state of affairs, or an event or a process). For it is not true that any body or any soul is of this sort. Hence, it is impossible to say truly either that, for instance, "certain dependencies together with certain things are components of apparatuses", or that "people describe facts" or that "the agitation has achieved its aim"; it is impossible to say truly anything like this, provided that the words involved here are synonymous with the same-sounding words in utterances about things, for instance, in the sentences: certain rods together with certain small wheels are components of apparatuses; people describe things; the agitator has achieved his aim. For in all these cases the truth of the utterance would imply as a necessary condition that a certain object be a property, or a certain object be a relation, or a certain object be a fact. For instance, the following argument would then hold: if people describe facts (more exactly: certain people describe certain facts), then certain facts are described by certain people; then, further, certain objects are facts, then, certain things are facts; then, finally, certain bodies or souls are facts. Hence, if one can say truly that people describe facts, etc., one can do so only to the extent that words

are understood here differently from when one says in the basic way, that people describe things; for instance, if one understands the above mentioned utterance about facts as a substituting-abbreviation of the utterance: "people tell how things are or how they change". Generally speaking, if every object is a thing, then we have to reject every utterance containing the words "property", "relation", "fact", or their particularizations, which implies the consequence that certain objects are properties, or relations, or facts.

Two cases are to be considered here, depending on a two-fold understanding of these terms. In fact, one understands the words "property", "relation", "fact", either as names proper or as apparent names. The first case occurs if anyone defines the word "property", for instance, as follows: "a property is the same as: an object somehow sticking to a thing or things, which we can conceive by abstraction"; or, if he defines the word "relation" as follows: "by a relation I understand something which cannot be perceived through the senses, but which can be represented in thought somehow as a sort of bond between things, due to which, for instance, one thing is larger than the other, one thing is similar to the other, one thing influences the other, etc." Passing over the haziness of the above definitions, exhibited if only by the word "somehow", which is unfortunately very frequent in definitions of this sort, we have nevertheless to affirm that the words so defined are names proper, that is, that they can be used, without structural nonsense, as subjects or predicates in sentences of the types "A is B", "some A is B", "every A is B", "there is an A"; provided that the logical constants which occur here mean the same as in the sentences: "John is a tailor", "some rocks are crumbly", "every insect is six-legged". With such an interpretation of the words "property" and "relation" the expressions "there are properties" and "certain objects are relations" are sentences correctly constructed, meaningful, and subject to an evaluation as to their truth or falsity, as are, for instance, the sentences: "there are werewolves", and "certain objects are Pegasi". They will be, however, like the latter, false sentences, and the names used in them, "property" and "relation", like the names "werewolf" and "Pegasus", are names without denotation, vacuous, though proper. Thus, on this interpretation of the terms "property", "relation", "fact"— "the rejection of every utterance implying the consequence that certain objects are properties or relations or facts" consists simply in recognizing every such utterance as a false sentence

and, accordingly, in affirming the negation of every such sentence. Thus, on this interpretation of the terms under discussion, we simply affirm that there are no properties, relations, facts; we simply maintain that no object is either a property, or a relation, or a fact. However, one can also find another understanding of the terms in question. On this interpretation the statement: "The relation of brotherhood is symmetrical" is a substituting-abbreviation of the sentence: "if anybody is a brother of somebody, then the latter is the brother of the former"; the statement "any two objects have common properties" is a substituting-abbreviation of the sentence: "for every X and Y, and for some Z: X is Z and Y is Z" (for instance, X = Paris, Y = London, Z = capital); and the statement: "the fact that an agreement was reached caused universal joy" is a substituting-abbreviation of the sentence: "all were overjoyed when they agreed". Generally speaking, with this understanding, the words "property", "relation", "fact" occur merely in substituting-abbreviating phrases, and outside them cannot be used significantly. In particular, every utterance in which one of these words would occur as a subject or predicate would show structural nonsense, provided that the logical constants ("is", "some", "every", "there are") are preserved in the role they play relative to the names "John", "rock", "insect". Thus the expressions: "there are properties", "certain objects are relations", would be nonsensical, just as, for instance, are the expressions: "there are because", "certain objects are sees". The difference consists in this, that phrases of the latter type are obvious nonsense, since the words "because" and "sees" are not names, and do not look like names, while the words "properties" and "relations", without being names, look like names. They are, therefore, not names but "nameoids"; not names proper but apparent ones. Thus, on the interpretation of the words "property", "relation", and "fact" as apparent names, "the rejection of every utterance implying the consequence that certain objects are properties or relations or facts" does not consist in recognizing such utterances as false sentences, and affirming their negations, but consists in eliminating such expressions by recognizing them as disguised nonsense, hence as expressions which only appear to be sentences, and which, therefore, are not subject to evaluation as true or false. After these distinctions and clarifications we shall perhaps cause no confusion by formulating the rejection of the expressions in question in both cases by means of the same formula: "There are no properties, or relations, or facts". It is clear that this formula

applies also to all words which are apparent names of "particular properties", "particular relations", "particular facts", or "particular kinds of properties, relations or facts", thus for instance, to the words "roundness", "similarity", "dependence", "state of affairs", "event", "process". By eliminating in this way the sham ontological categories of properties, relations and facts we oppose ourselves to all attempts at conceiving reality, *i.e.* the totality of objects as "consisting of things, properties, relations, events, etc." The totality of things is identical with the totality of bodies and souls. And although in our exposition thus far we have only opposed "properties", "relations" and "facts", yet our intentions obviously reach further. We take exactly the same attitude towards any other sham ontological category, *i.e.* any category which is not the category of things; thus, for instance, towards the sham world of "classes", if anybody conjectures such a world, first, by recognizing the word "class" as a name proper and not an apparent one, secondly, by holding that it is not objectless but has designata, and, finally, by not regarding these designata as things (bodies or souls).

As a precaution, however, three reservations are in order. First, by saying that such and such a thing exists, we do not by this alone ascribe presentness to it. In our sense there exists equally well the earth-globe of the twentieth century, the long dead Gaius Julius Caesar, or (to risk a prophecy) the oldest inhabitant of Rome on 25th July, A.D. 2300. For "X exists" means the same as "something is an X" (ex X = Y (Y est X), Df.);[1] and the term "something", synonymous with the term "object", is according to reism extensionally equivalent to the term "thing", is a name of an arbitrary thing, independently of whether it is a past, an actual, or a future thing. Secondly, by rejecting "the existence of properties, relations, and facts" and so on, we by no means deny that things are such and such, that things are so and so with regard to other things, or that things change in such and such a way (in particular that sentient individuals act). Indeed, we agree, of course, that billiard balls are round, that the earth is larger than the moon, that iron rods rust; we only do not agree that there exists "the roundness of billiard balls", that a certain object is "the relation of being larger holding between the earth and the moon", that something is "the fact of iron rods rusting". Third, we do not reject sentences which run: "there exist properties", "something is a relation", "a certain object is a fact", and the like, if the words

[1] A minor misprint in the original formula has been corrected by the translators.

used in them have different meanings from those discussed above, if, for instance, by the phrase "there exists the property of X-ness" somebody would like to understand: "the expression 'a certain thing is X' is meaningful" (for instance, by "there exists the property of solubility", this person would understand "the expression 'a certain thing is soluble' is meaningful"). What is more, we even understand the need of operating with phrases which in the basic interpretation would imply the existence of properties, relations, facts—namely, for the purposes of economy of style; provided only that this always happens with the awareness of the secondary, abbreviating-substituting interpretation of these phrases in the given case of their use.

The question arises as to the existence of "colours", "tones", "feels", "smells", "tastes", and other "elements of the contents of ideas" and, in general, of "the contents of ideas" or, in other words, "immanent aspects". Clearly from the point of view of reism it is not true that any thing is any one of these "elements", that it is a colour or a tone or a feel. Hence, with regard to these elements of content, we repeat what we have said with regard to properties, relations, facts. In exactly the same way "we reject their existence". In exactly the same sense we claim that there are no elements of content, and clearly also that there are no contents altogether, if contents are to consist of elements of contents. We are diametrically opposed to idealists who recognize both bodies and persons as systems of elements of contents. Hence our point of view can properly be called "radical realism". We do not believe that one ascertains the existence of contents in a direct empirical manner. On the contrary, we consider this view to be a product of learned speculation. Fragments of our surroundings seem to us coloured, sounding, rough, and so on; it seems to us that something there, above, on the right is round and luminous, that something here (in the mouth) is soft and sweet; "this here, above to the right is round and luminous" (and not "is a synthesis of a round shape and a lustre"), "something here is soft and sweet"—in such sentences, for instance, do observers make their utterances when they affirm something empirically and directly. We do not believe, however, that an observer affirming something empirically and directly, that is, affirming what really appeared to him when observing, necessarily affirms truly. We do not intend to consider here criteria which distinguish directly empirical true sentences from directly empirical false sentences. In no case, however, does radical realism as such exclude the view that things may be coloured, sounding, rough, soft, and so on. Within

the framework of radical realism there is a place for the view that a white and sweet cube of sugar exists, though neither whiteness nor sweetness exist; and that lemon juice is sour, though nothing is a sour taste.

Let us consider more closely the admissible use of qualitative characteristics under the idealistic assumption, under the critical-realistic assumption, and, finally under the radical-realistic assumption. An idealist recognizes the existence of things (bodies and souls) which he identifies with systems of aspects (not only visual but pluri-sensual), and elements of content are for him, in turn, parts of these aspects. He regards things, and hence also aspects, as qualitative; as qualitative also, though in a somewhat different sense, does he regard elements of content. From this standpoint when saying, *e.g.* "a cube of sugar is sweet" he says the same as "sweet taste belongs as a part to the system of aspects which is the cube of sugar", and "sweet taste" means here the same as "taste being sweetness", or "taste identical with sweetness". A critical realist recognizes the existence of things which he distinguishes from systems of their aspects, the existence of which he also recognizes and parts of which (*i.e.* of aspects) are also for him elements of content. He regards things as qualityless, aspects as qualitative, and elements of content as also qualitative in a somewhat different sense. From this standpoint he who says, for instance, "a buttercup is yellow" expresses himself inexactly. He should rather say: "the aspect of a buttercup is yellow", understanding by this: "the aspect of the buttercup contains yellow colour as a part", and by "yellow colour" understanding "colour which is yellowness" or "colour identical with yellowness". A radical realist recognizes the existence of things which are not systems of aspects. He does not recognize the existence of systems of aspects at all, as he does not recognize the existence of elements of content. According to his view, he who says "the aspect of cinnabar is red", or "the (tactual) aspect of a nut-shell is hard", using the word "is" in the basic sense, utters either falsehood or nonsense; falsehood if the phrase "the aspect of cinnabar" or the phrase "the aspect of a nut-shell" proves to be a name proper (for then the subject of the sentence is a name proper which is objectless), and nonsense if such a phrase proves to be an apparent name. Something similar can be said about the expressions: "red colour", and "hard tactual quality", which are synonymous with the expressions "the colour identical with redness", and "the tactual quality identical with hardness". These expressions are either empty names proper or

apparent names, hence sentences with these expressions in the role of subjects are either false or nonsensical, if the structure of these sentences and the logical constants contained in them are interpreted in the basic way. Radical realism agrees with the hypothesis that only that can be rightly called " qualitative " (" green ", " bitter ", " hard ") which acts on our sense organs, and only things do so, things may be green, bitter, hard . . . Thus, this standpoint rejects the view that aspects, which are not things, act on our sense organs, that systems of colours, feels, tastes, and so on, as well as colours, feels, tastes themselves can act physically.

Reism as such is not yet somatism, but somatism finds its place in the framework of reism as a particular case. Every soul is a body—this is the thesis of somatism. Its consequence on the basis of reism is pansomatism, which asserts that every object is a body. In other words, according to pansomatism only bodies exist. The whole of reality consists entirely of bodies. The soul is identical with a certain fragment of a physical individual. Which fragment it is : the whole of the nervous system, the cerebrum, or a determined sector of it, or some other fragment of the organism, or, finally, the organism in its entirety —this somatism, as such, does not prejudge.

Is not pansomatism simply materialism? Yes, it is a certain variant of materialism, and if we do not content ourselves with the latter term, it is because of its elasticity, since rather different doctrines are often brought under this one name. Thus, for instance, materialism, in its most common sense, probably would not recognize the thesis that every soul is a body, but the assertion that there are no souls at all would be more congenial to it ; though presumably both formulations would amount to the same thing, in fact, to this, that organisms or their parts—and only they—are sentient. Besides this verbal difference, however, some more profound differences appear. The common materialist identifies " psychical facts " (" events ", " processes ", " phenomena ") with " physical facts ", exhibiting hereby the tendency to treat this issue as if certain objects were facts. A reist, on the other hand, and hence also a pansomatist, recognizing the word " fact " as an apparent name, has to reject the assertion : " every psychical fact is identical with some physical fact " as only apparently meaningful, unless some interpretation is given in the light of which this assertion would prove to be an abbreviating-substituting expression. Furthermore, common materialism is mechanistic, that is, it assumes that everything which happens (and thus also how bodies experience) is determined by how

gravitating solids (or electrons) were previously distributed, in what directions, with what and how variable velocities they were moving and what masses (or other measurable C.G.S. magnitudes) they had, as well as by laws of succession of events determining later distributions, directions, velocities, etc., exclusively on the basis of these data. On the other hand, somatism as such is not in principle bound to the mechanistic hypothesis. Nor is it connected in a necessary way with finding "psychic phenomena" to be some "epiphenomena", that is, something "on which nothing causally depends", and "without which, in particular, everything would move in just the same way". Finally, there is nothing in somatism which would compel us to assume that sentient bodies have developed exclusively from non-sentient ones as is claimed by common materialism. This is for somatism one of the possibilities, but not the only one. It is compatible also, for instance, with the opinion according to which every object either is sentient or consists of sentient objects and that sentient objects differ in the degree of intensity of sensing, so that fully sentient objects could have developed from those sensing somehow incipiently.

Compatible with somatism is the following interpretation of psychological enunciations, which we accept: Every singular psychological enunciation can be brought under the schema: "A experiences thus: P", where "A" is a name-variable and "P" is a variable admitting as substitutes all concrete enunciations, in a particular case—sentences (but also, for instance, exclamations). This whole is not a formula which is extensional with respect to "P", in particular it is not a truth function of the variable "P"; this means that the logical value of a definite substitute of this formula is not determined, for a given "A", by the extension of the substitute of the symbol "P", and in particular by the truth value of the sentential substitute of this symbol. In common speech we formulate singular psychological enunciations, *e.g.* thus: "John sees that it is light". In this case instead of "A" we have "John"; instead of "experiences"—a word of a narrower scope—"sees"; instead of "P"—the sentence "it is light"; and the conjunction "that" is here a particular case of the colon. In other cases the construction may be different, as for instance in the enunciation: "Peter wants the room to be warm"; here the colon is omitted altogether and the sentence "the room is warm", to be substituted for "P", is changed in the process of substitution. We do not claim that these two methods exhaust all possibilities in colloquial speech of binding sentence components into a singular psychological sentence. In order to grasp

intuitively the structure of psychological enunciations, let us consider an analogous structure. Let us suppose that somebody, showing an inkwell, says: "This contains ink". Let us now form the whole consisting of this expression in the first place, of the colon in the second, and, finally, of the indicated inkwell itself in the third. It will look as follows: "This contains ink: [ ]". (Let the square replace the inkwell; this square is not a name of the inkwell but the pretended inkwell itself, something which we place here, being unable to put in the inkwell for technical reasons.) Now the structure of psychological enunciations, *e.g.* such a one as: "John sees thus: it is light" is similar. A difference among others, consists in this, that in the example with the inkwell we find after the colon that which is pointed to by the word "this", that which is its designatum, of which this word is a name; while in the example with John this is not the case—here the words "it is light" are not a designatum of any of the preceding words, instead they express what is experienced by the one who sees precisely in the particular fashion to which the word "thus" wants to call attention. Common, on the other hand, is something which in the example with John is disguised, but in the example with the inkwell (which, by the way, is not an example of a psychological sentence, but has a rather similar structure) strikes one immediately; namely, the whole in both these cases is not a sentence, though in the second case (with John) it consists of two sentences brought together in the way indicated. (In the first case, this whole consists not of two sentences, but of a sentence and an inkwell brought together in a way which is rather similar to that of the second case.) These two sentence-components of a psychological enunciation do not form a sentence, just as the other whole consisting of a sentence, a colon, and the inkwell itself, indicated by the pronoun in the sentence, does not form a sentence either; just as, by the way, an axiom system of a deductive theory is not a sentence, though it is a whole consisting of sentences (one should of course distinguish a system of axioms from their conjunction, which is a compound sentence); or just as any enunciation of the form: "p hence q" is not a sentence, though it is a whole consisting of sentences ("p hence q" should be distinguished from the implication: "if p then q", which is a compound sentence). While in the case with the inkwell this is obvious (for how could an inkwell itself, not functioning as a sign at all, constitute a part of a sentence?), in the case with John this is disguised, for the role analogous to that of the inkwell is played here by what is after all a sentence. The difference is, however, not essential. And

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if singular psychological enunciations are all of this kind the conclusion follows that they are wholes which are not sentences and which hence are not subject to the classification into true and false enunciations. But, nevertheless, there are psychological truths! And there are errors in psychology! Of course. Essentially, however, what is subjected in these cases to logical evaluation is the pre-colon part of the psychological enunciation: "John sees thus", "Peter wants thus", and the like. This is in full harmony with the fact that the truth of a psychological enunciation (strictly speaking, of its pre-colon part) does not depend on the truth or falsity of the post-colon part. Whether indeed it is light or not is irrelevant for the truth of the sentence that John sees just thus (in case he sees thus), or for the falsity of the sentence that John sees just thus (in case he does not see thus). Hence, a singular psychological enunciation is, in its intention, somehow two-dimensional. The first part indicates what the second expresses (namely, it indicates as such somebody sensing somehow), and the second when expressing, for instance, somebody who sees in this or that way, does it by describing the surroundings as he would describe those surroundings while seeing them in just this way. In the first part the speaker behaves as if he announced a forthcoming imitation of the seeing person spoken of; in the second the speaker behaves as if he were carrying through this imitation, feignedly describing the surroundings of the person spoken of as if the latter were describing them himself. And if the speaker himself is being described—if, for instance, the resulting psychological sentence is introspective, then imitation becomes self-imitation, and the peculiar certainty of introspective sentences is explained by an almost infallible aptitude of experiencing persons for such on the spot self-imitation. Thus the view of the nature of psychological enunciations presented here could be called "imitationism".

Imitationism makes possible an attempt at reducing the so-called "inner experience" to the so-called "outer experience". We stipulate that by enunciations of the outer experience we understand not only descriptions in terms of mechanics, but also descriptions using qualitative terms which have visual, auditory, tactual, sensoriorganic, etc., character, briefly: sensory and extrospective character. It is to be noted that the interior of our own body, due to the organic sense, the articular sense, the muscular sense, etc., also belongs to the sphere accessible to extrospection, *i.e.* to the outer sensory experience. Therefore, descriptions like "blood is red", "moss is soft",

"ice is cold", "brine is salty", "it is oppressive here", "it is stuffy here", "it is hazy here", are extrospective. In the last three instances "here" indicates in a summary way the interior region of the body of the speaker, where the latter localizes the peculiar "qualitative mark". And such enunciations should be distinguished from psychological ones which would run correspondingly: "John (in a particular case: I) experiences thus: it is oppressive here" ("... it is stuffy here," "... it is hazy here").

Now, as we assumed above, every singular psychological sentence can be formulated in the following way: "A experiences thus: P". Let us consider for instance: "John sees that it is light". By means of the word "sees" we want to let it be understood both that he looks, *i.e.* that his visual apparatus is active in a familiar way, and that this or that seems to him for this reason somehow coloured, somehow light, somehow shaped, and not sweet, or rough, and so on. But what is here more specifically psychological is expressed later in a more exact way in the words "it is light", so that from a purely psychological viewpoint the assertion "John sees that it is light" is a pleonasm, as compared to the expression "John experiences that it is light", which is a particularization of the expression "John experiences thus: it is light".[1] The second part of the latter formulation, "it is light", constitutes a summary description of the surroundings made in extrospective terms. And we obtain a similar result with respect to the second part when analysing the example with Peter, where the whole will assume the form: "Peter experiences thus: let the room be warm", and the like. Hence it remains to consider the first part: "John experiences", "Peter experiences"... Now "experiences" means the same as "is experiencing". We try to interpret the word "experiencing" as follows. It is merely an announcement of the imitation of the individual spoken of by the speaker, and it informs in a summary way in what respect he will be imitated: thus, that the individual spoken of will be imitated as looking, or listening, or exploring tactually, and so on; in brief, as orienting himself in a peculiar manner which is common to all the cases involved, and which can be described by using exclusively cenesthetic terms, that is, terms belonging to the domain of organic, muscular, and related senses. And it is known that in this domain we essentially lack precise terms. If thus the phrase "imitating somebody" means here the same

[1] The following three sentences in the original, which depend on certain properties of the Polish language not shared by the English, are omitted.

as " behaving as this somebody behaves ", if " behaving " means here the same as " moving impulsively ", if, further, these terms are extrospective terms, then the first part of our psychological enunciation—like the second—has been reduced, as regards the names occurring in it, to extrospective terms, provided we shall count among such, as we actually do, also all names of persons, including the name " I ", which in principle are accessible to an analytic definition by means of cenesthetic and other extrospective terms. Should the above analysis of certain singular psychological sentences be correct, it would open the way to a monism of a higher degree than the monism of plain pansomatism. For not only would all objects be reduced to bodies, but there would be only one source of experience—extrospection. Thus perhaps it would be proper to call this last thesis " extrospectionism ". Now, the question arises: assuming that the universal regularity of events exists, is it not in principle accessible only to multidimensional formulations, particular cases of which are psychological enunciations? Let this question mark remain at the end of this discussion as a symbol of a heuristic and not a propagandistic attitude of the writer. For being aware on the one hand of the depths of the mysteries of being, and on the other hand of the haziness of the notions launched here, he cannot refuse himself the opportunity of quoting, in conclusion, the well-known saying: *quod autem potest esse totaliter aliter.*

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V.—ON THE PROBLEM OF OBJECTIVE REALITY AS CONCEIVED IN THE EMPIRICIST TRADITION

By Peter Zinkernagel

As is well known the problem of external reality has been discussed in European philosophy for more than two thousand years. Here we are, however, only concerned with the turn given to the problem at the end of the seventeenth and in the beginning of the eighteenth century under the influence of physics.

The immense success of physical science during the renaissance was achieved by letting experiments define the use of such words as "force" and "movement", thereby replacing the formal logic and isolated experiments of the Middle Ages by an informal logic, defined by the experimental apparatus and procedures. Empiricist philosophy, inaugurated by Locke, Berkeley and Hume, attempted to treat the problem of reality by founding the use of such words as "reality" and "existence" on clear indubitable experiences or to use Hume's own phrase "experiments". Although the attempt failed, the very approach was entirely new and original and well deserves the proud name of "positivistic" or "empirical".

Even among physicists themselves the proper conditions for the use of the word "experiment", essential to any physical description, were not elucidated until Bohr's wonderful analysis of the situation in quantum mechanics. Even up to the present day physics has seemed to many philosophers to consist of mathematical laws, describing correlations between observations. Hume, Berkeley and their followers set out to explain "reality" in terms of an observational concept, called by different names at different times, "perceptions", "sense-data", "ideas of impression", "phenomena" and so on. We are not here concerned with the misconceptions of physical science on which the attempt was grounded. Still less are we concerned with the metaphysical presuppositions of its instigators, whether for instance Hume was a sceptic only about rational understanding, not about "nature".

We should, moreover, like to pose the problem in a language free from the subjectivistic presuppositions, inherent in such words as "sense-data", "ideas" or "phenomena", presuppositions partly taken over from the older and more general

problem of objective existence, partly resulting from physiological investigations. We may do so by formulating it as a problem about the use of ordinary words. Can we use such words as " hear ", " see " and so on without having to accept the use of such words as " exist, whether seen, heard or not " ? We will answer this question through an analysis of such ordinary words as " act ", " see ", " hear " and so on, and if the analysis is successful we shall understand not only how we actually use these words, but that we have to use them in the way we actually do use them, if we want to use them at all, that is if we want to describe what they describe.

Let us start with the word " to act " and let us consider a concrete instance of its application, for instance moving an inkstand. If we use ordinary language to describe what we mean by the words " moving an inkstand ", we see at once that we cannot use such a word as " to act " or " to do something " without having to use such words as " being able to do something " and " not being able to do something ", *i.e.* without having to use words describing what is possible and what is impossible. We would for instance say that having moved the inkstand we may now move our hand freely across the place on the table where it formerly stood, but not across the one where it is now standing, that is we would say that the act of moving the inkstand has changed our possibilities of action. Before moving it we could do something which we cannot do now and we could not do something which we can do now.

As the point is an important one and presents some difficulties to a closer understanding we shall dwell a little longer on it. It might be thought that if we move our hand in the air without encountering or moving any object this act could be described without having recourse to words describing possibilities of action. A little reflection will show us that this is not so. We cannot talk about moving our hand without having to use a word like " direction " and what could we understand by " direction ", if we did not take distance from solid bodies into account ? Indeed, our hand itself can only be described in ordinary language as a solid body and its movement as a change in relation to other solid bodies.

But do we need words describing what it is possible and what it is not possible to do in describing the change brought about through actions ? Could we not describe any such act as a change in actual consequences ? Instead of saying that a certain act changes our possibilities of action, might we not simply say that when we have acted some further acts will be followed by

other consequences than before we acted : that having moved the inkstand, if we now move our hand as we did before, we shall not encounter it, and so on ?

Again a little reflection will show us that this is impossible. To describe any such consequences we would have to employ such words as " if " or " when " : " if we move our hand in such and such a way, we shall encounter so and so ". But whatever " if " and " when " describe they do not describe actual consequences ; if they did we should not need them. But the point is that we do need them for the simple reason that no actual consequence follows from any act, if we refuse to employ words describing the possible : " if " and " when ". It is manifestly absurd to say for instance that having moved the inkstand we shall encounter it in a new place, because we shall not encounter it at all, if we do not move our hand. Neither can we say that the moved inkstand means that a marble ball on its way across the table toward the new place of the inkstand will be stopped by it, because it will not if we move the inkstand again or if we stop the ball before it reaches the inkstand, and so on.

We should realize that we cannot use words describing the actual without having to use words describing the possible (in older philosophical terminology " the potential ") ; that we cannot use such a word as " to act " without having to take into account words describing what it is possible and what it is impossible to do, *i.e.* words referring to what in ordinary language would be called the objective state of affairs or rather the position of ordinary things. To use the word " act " without using words like " the objective state of affairs " would be like using the word " movement " without using " direction ", or " change " without " of something ", or " act " without " change ". It would indeed amount to maintaining such a proposition as " We are doing something, but we must not say that we are able to do it ".

Even if perhaps nobody has ever seriously tried to define " movement " without using such a word as " direction " a great and sustained philosophical effort has been made to define among others the above mentioned concepts in words referring only to what are called " experiences ", " perceptions ", " sense-data " or " phenomena ". An act was thought to be describable as a succession of kinesthetic sensations (see C. I. Lewis, *An Analysis of Knowledge and Valuation*, pp. 172-175). The act of moving the inkstand would for instance be described as the feeling of taking the inkstand, the feeling of moving it and the feeling of putting it down again. What in ordinary language we have described as a change in possibilities of action would be described as a change in

possibilities of kinesthetic sensations of the form " if-then ". If we have the feeling of moving our hand across the table then we shall have the feeling of encountering the inkstand, and so on.

If, however, we want to talk about kinesthetic sensations as effecting a change in possibilities of kinesthetic sensations, we shall also have to say that our possibilities of sensation are fixed and change through what in ordinary language we would call a causal occurrence. Furthermore, we should have to say that such changes happen whether we perceive them or not, as " possibilities of kinesthetic sensations " refer to no actual sensations. We should in short be compelled to talk about " possibilities of kinesthetic sensation " in the manner in which we in non-phenomenalistic language talk about possibilities of action and the objective state of affairs, or ordinary things as tables, chairs, and so on.

Just as in non-phenomenalistic language we say that a conscious act is a change in possibilities of action accompanied by kinesthetic sensations we should have to say that kinesthetic sensations is a change of possibilities of kinesthetic sensations, accompanied by kinesthetic sensations. As soon as we take possibilities of sensation into account the new language would in no way be superior to or different from non-phenomenalistic language, because it would have to refer to the same circumstances. It would only be more confusing, because through the use of such words as " act " and " possibilities of action " non-phenomenalistic language is able to talk about unconscious acts and so in a very clear way to express the irrelevancy of " consciousness " for any description of the " objective state of affairs ".

If, on the other hand, we choose to dispense with the word " possible " altogether and talk only about actual sensations, we cannot talk about kinesthetic sensations as effecting any change in future sensations, because as we have already seen, no future kinesthetic sensation do in fact follow from the past or present kinesthetic sensations. Moreover we can have no rational reasons for discarding the word " possible " ; we certainly know how to employ it just as well as we know how to employ " actual ", and we cannot of course infer that we should not talk about the " possible " from the fact that we do talk about the " actual ", as some philosophers seem to have thought. Worst of all it is doubtful whether it makes sense to talk about actual sensations without taking into account possibilities of sensation or in more ordinary language whether it makes sense to talk about kinesthetic sensations without talking about the objective state of affairs, tables, chairs and so on.

XUM

As already mentioned the Empiricist school tried to define such ordinary words as "thing" and "exist" in terms of a concept akin to the concept of "observation" in physics. In his book, *The Concept of Mind*, Professor Ryle has pointed out how this concept arose through a confusion between words for observation and words for sensation. The attempt to describe an act as a series of kinesthetic sensations is one result of this confusion, and to understand it we shall have to look more closely into the ordinary use of such observational words as "to see", "to hear" and so on.

Let us consider such an everyday statement as "We see an inkstand on the table before us". This statement is a true one, if we are also able to use such words as "There is an inkstand on the table before us and we can see it". The statement is false if we have to say either "There is no inkstand there" or "We do not see it". We have already analysed the words "There is an inkstand before us" so far that we know that it at least means that we must also be able to use other words such as "We can do some things and we cannot do other things" and we can now say that "to see an inkstand" refers to our ability to recognize an objective state of affairs by sight or through visual impressions. In like manner "to hear", "to smell" and so on means to have auditory and olfactory impressions of objective states of affairs.

In this way we understand how the words "to see", "to smell" and so on are used, because we understand their relations to other words such as "the objective state of affairs", "tables", "chairs" and "what we can do and what we cannot do" and we can characterize the positivistic attempt as an attempt to use the words "to see", "to hear" and so on or "impressions" or "sense datas" without referring to "the objective state of affairs".

Moreover, we can state quite clearly why we cannot accept this attempt. We cannot accept it simply because we do not understand the words used in it. The one thing we are told about this use is that the words are not used in their ordinary sense, that they do not refer to "objective states of affairs", but this could only mean something to us, if we at least knew what "objective state of affairs" means. The assumption, however, is that we do not know this, that indeed "objective states of affairs" are either meaningless words or else words definable *in* the new words. The difficulty is of course only obscured by introducing new terms such as "phenomena". Either "phenomena" means the same as "impressions" in non-phenomenalistic language and then we shall need such words as "objective

state of affairs" to explain their use or else they mean something different and we do not know what. In some epistemological discussions they are used both in the old and in the new sense simultaneously so that nonsense results.

In a peculiar way this is reflected in the introduction of the new words. They must of course be introduced through ordinary words such as "looking at the sun, one receives a sense impression" and then the analysis goes on to show us that we do not use these words correctly in ordinary speech.

Let us return to the attempt to express an act as a series of kinesthetic sensations. In non-phenomenalistic language we talk about the kinesthetic feeling of moving our hand toward the inkstand. If, however, we want only to use words referring to actual sensations, past, present or future, we cannot as we saw define the use of the words "objective state of affairs". We cannot talk about the kinesthetic feeling of moving our hand toward the inkstand, because we cannot use the words "hand" and "inkstand". This means of course that we do not use the word "kinesthetic feeling" in the way we do in non-phenomenalistic language and again we are left with the problem: in what way do we use it?

In ordinary language we say that we feel we are moving our hand toward the inkstand, because we know how to employ the words "possible to do" and "impossible to do", but if we are not free to use the words "possible to do" we cannot use the words "kinesthetic feeling of" either and so we cannot even understand the attempt to define an act as a series of kinesthetic feelings, because we do not understand how the word "kinesthetic feeling" is used.

As long as we concentrate our attention on sense impressions it does not seem manifestly absurd to say that "possibilities" refer only to relations between actual impressions and that such words as "objective state of affairs" refer only to these same relations, because we do not change the relations between sense impressions by having them, by hearing, seeing and so on. This is different when we concentrate on what it means to act. As we saw we cannot use the word "to act" without taking into account words referring to what it is impossible and what it is possible to do, because otherwise we cannot say that our act changes anything. Even if we try to talk about acts in analogy with impressions as a series of kinesthetic sensations we must talk about having such sensations as changing our further possibilities of sensations: we must use words in the way we do when we talk about possibilities of action.

XUM

As we also saw, this way of talking is awkward, because it compels us to define a change of possibilities of sensations in such a way that it becomes immaterial whether we are conscious of it or not and then it is of course problematic in the extreme to talk about "kinesthetic sensations causing a change in possibilities of sensations". A closer analysis showed us that we cannot even use such words as "impression" or "kinesthetic feeling" in any clear way without referring to "objective state of affairs", without being free to use the words "possible and impossible to do".

Before entering into its relevancy for some other philosophical questions we should realize the limitations of the analysis just given:

Throughout the exposition we have used the pronouns "I" or "we" without analysing them. This seems permissible because it seems possible to express all the arguments as arguments about the way we use such words as "to be able to see", "to exist", "to act" and so on, but of course we cannot be sure of this until we have analysed the words "I" and "we" and their relation to verbs in the infinite. Such an analysis, however, belongs to the already mentioned more general problem of objective as contrasted to subjective reality, and of this nothing has been said here. To write about such words as "exist", "act" and "perceive" without analysing the use of the words "I" and "we" seems the more legitimate, because in modern times "sense data" and "phenomena" are generally introduced without offering any analysis of "I" and "we" and we seem at least to have established that this is impossible.

The given analysis is incomplete as regards the general problem of objective existence, but nevertheless it appears to point to fundamental weaknesses in the positivistic approach to philosophical problems.

As is well known the problem of objective existence as conceived in the empiricist tradition is one of a group of problems of inferring something considered as the not-given from something considered as the given. The problem of induction for instance is the problem of inferring future instances of a causal law from past and present ones. The problem of other minds is the problem of inferring the existence of other minds from the existence of one's own and the problem of the validity of memory is the problem of inferring former facts from present memories. Lastly, the problem of objective reality may be expressed as the problem of inferring the unobserved from the observed.

In all cases the formulation of the problems is intimately connected with the attempt to express everything in terms of

observations. We have already seen this as regards the problem of objective existence. The problem of induction arises as a result of the attempt to express a causal law as relations between observations and likewise in the problem of other minds and the problem of memory the difficulty is to infer other observations from some considered as given.

If our analysis is convincing we have seen how this way of posing the problem of objective existence was wrong or rather meaningless. We could not talk about the " observed " without talking at the same time of the " unobserved ", because we could not use words for observations such as " see ", " hear ", " have impression of " and so on without referring to " the objective states of affairs ", " tables ", " chairs " and so on, and these words we had to use in such a way as to be independent of whether we actually saw, heard or acted. If this is so there is of course no problem of inferring the not-given from the given, because we cannot talk about the " given " without allowing for the " not-given ".

In like manner it is possible to show that we cannot talk about objective time, past, present or future without using a causal description and so it is meaningless to ask whether causal laws will apply in the future : to put it in another way : we cannot ask whether causal laws are independent of time, because we cannot talk about time independently of causal laws. The problems of the validity of memory and of other minds are more complicated, because they cannot be treated without an analysis of " we " and " I ". Suffice it here to remark that it is probably impossible to talk about one's own mind without allowing room for other minds and that the problem of the validity of memory may presuppose the validity of objective time or causal laws, so that any tendency to say that owing to the unreliability of memory we do not know whether the world existed five minutes ago may be a misunderstanding of the whole issue.

In a peculiar way the discussions about the relationships between the given and the not-given conflict with the theory of analytic and synthetic propositions.

If one says for instance that the not-given is less secure than the given, because it does not follow logically from the given, one is judging problems of fact by logical standards, while the theory of analytic and synthetic propositions quite clearly states that nothing empirical could ever be logically proven. If this is so no empirical statement can be either more or less secure just because it cannot be logically proven.

In his book *Language and Philosophy* Max Black pointed out

that one cannot say that inductive inferences are inferior to deductive ones, simply because they are different. We might perhaps express this even more strongly by speaking about "the logical fallacy of inferring the fact that one cannot infer the not-given from the given from the fact that the given is different from the not-given". If, however, it is impossible to talk about the given without allowing room for the not-given, then we cannot even ask questions in this way, because there simply is no question about inferences. We shall understand better why, nevertheless, logical considerations seemed relevant, if we once more return to a statement like "things do not exist, when not perceived". If the given analysis is accepted then this statement is not only false but meaningless, because we neither understand the use of the word "thing" nor of the word "perceive" in it. Such a statement is logically false and it becomes at once apparent why it has always been felt that logical considerations were somehow relevant to discussions about objective reality.

Let us now consider the positive statement "things do exist even when not perceived" and see whether we can make this statement fit into the framework of analytic and synthetic propositions. Obviously it cannot be a synthetic proposition if the analysis is true, because, as we saw just now, it becomes meaningless if we employ the word "not". The only other possibility left by the theory of analytic and synthetic propositions is to consider it as an analytic statement, one which does not tell us anything about "reality" but only about definitions of words.

Such a viewpoint contrasts violently with the attitude developed in this paper, whose whole point is to show us that we not only may but *must* use such words as "hear", "see", "act" and "exist" in the way we actually do use them in ordinary language. Moreover, it presupposes that one may distinguish between "reality" and words describing it, but in what sense we may do so is dubious, because "reality" itself is a word which we must learn to use in a correct manner. If one says that only such statements tell us something about reality as may be denied without becoming meaningless we are left in a curious dilemma. Either the foregoing proposition is a definition of the word "reality", in which case it does not tell us anything about reality, or else it does tell us something about reality, but in that case it may be meaningfully denied.

It has been thought that the given elements of reality were isolated facts of experience or impressions, of which one might

give a definition by pointing; that all other concepts might be expressed as arbitrary logical rules about relations between such elementary words; and that therefore the just stated dilemma does not arise: Either "reality" referred to single facts of experience and so was truly or falsely applied or else it referred to concepts and so depended on definitions.

But the fact is that we cannot distinguish between facts and definitions, because we cannot state facts without referring to frame of concepts and, for that very same reason, we cannot call definitions arbitrary.

As the notion "frame of concepts" is important to our point of view, we shall give a few examples of its use, the main idea being that no word is well-defined in itself but only in connexion with a closed group of words and this holds true not only for general words but also for words describing a particular event, because no particular event can be described without using general words. In Euclidian geometry one cannot define "section of line" without defining "point" and in classical physics one cannot define "force" without defining "position" and "movement", but let us take a concrete instance of a stone falling towards the ground. Here it is logically true that the stone will continue its path until it reaches the ground, because we cannot use the word "stone" without using "mass" and "law of gravitation". This has sometimes been obscured by using the phrase "given the proper conditions" and then going on to show that we can never be sure that the proper conditions obtain and that therefore the proposition "the stone will reach the ground" is either uncertain or else only analytically true. The point is, however, that even the words "proper conditions" can only be defined together with other words. We can talk of no single instance without using general words or put in another way the use of the word "not" is only well-defined in connexion with other words, and it is as meaningless to say that the stone may *not* continue its path without giving any reasons as it is to talk about a stone without mass.

We may get a clearer picture of the theory of analytic and synthetic propositions by considering the well-known difficulties surrounding the problem of verification. Let us choose an example from the common stock in trade of philosophers: How do we know that the inkstand on the table before us will not vanish into thin air in, say, five minutes? If we stick to the theory of analytic and synthetic propositions we must say that we do not know this and can never come to know it until we have actually seen that it has not vanished after the lapse of five

minutes, because no single fact of experience is incompatible with any other single fact. Try as we may to investigate the present situation by seeing, feeling and pushing the inkstand, we never arrive at any experience incompatible with the experience of not seeing and feeling the inkstand in five minutes.

We need not here enter into the different attempts which have been made to soften the harshness of this conclusion by introducing concepts of probability or confirmability. To apply such concepts by saying that it may become even a trifle more certain or probable that the inkstand will not vanish in five minutes, if we verify that we may feel and push it now, is to give up the whole theory of analytic and synthetic propositions. For this theory quite clearly states, that definitions of concepts connecting single facts of experience are arbitrary, which is just another way of saying that no single fact of experience could be of any possible relevance to any other single fact of experience ; or that we only experience and so can only verify single facts of experience.

The point of this paper is that we cannot use single words or point to single facts without referring to the general frame of concepts ; in particular that we cannot use such words as " see ", " hear " and so on in any clear way without allowing for the use of such words as " possible and impossible to do ", " the objective state of affairs ", " tables ", " chairs " and so on.

Let us now see if we can apply this viewpoint to the problem of verification. Having made the suitable tests of weighing and pushing the inkstand on the table before us, how do we know that it will not vanish into thin air in five minutes ? Or put in another way : why is it not possible that it should disappear in this manner ?

The answer is simply that this use of the word " possible " is indefinable and so meaningless.

When we say that it is possible to move the inkstand to a new place on the table, this use of the word " possible " is well-defined and unambiguous and its relations to such other words as " impossible " are quite clear. We can, for instance, say that it is possible to move the inkstand to a new place on the table, only if we are willing to accept that it is impossible that the inkstand should disappear while moving it. Otherwise we could attach no meaning to the statement " it is possible to move the inkstand ". We could understand the use neither of the word " possible " nor of the word " move " nor of the word " inkstand ". But if we say that it is possible that the inkstand should disappear into thin air, this use of the word " possible " clearly leaves no room for the word " impossible " and so we cannot understand it at all.

In like manner we cannot say that we do not know whether the inkstand will disappear into thin air or not, because the appropiate tests define the use of the words "possible" and "impossible" and having made them we cannot say that we do not know whether it is possible or not that the inkstand should disappear. These very tests define what it means to know the use of the words "possible" and "impossible". Of course the same holds true, if we reformulate the problem as a problem about the use of such words as "happen" and "change".

In physics one may express those matters more clearly, because physics is a close investigation into the proper conditions for the unambiguous use of such ordinary words as "material body", "movement" and "time".

We may sum up the discussion by saying that just as it is logically excluded that a square should be a circle, so it is logically excluded that the inkstand on the table before us should vanish into thin air, not because definitions are independent of experience, but because we cannot express single facts without referring to the general frame of concepts.

If it were possible that the inkstand should disappear into thin air, nothing would be impossible and consequently nothing would be possible.

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VI.—THE EMOTIVE THEORY OF TRUTH

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I

There are, we believe, adequate reasons for rejecting the emotive theory as it applies to value: both in ethics and in aesthetics. Later we shall suggest that a relativity theory is more appropriate, indicating, however, that there is a very close relationship between the emotive theory and the relativity theory.

Here, our task is to examine the problem of the meaning of truth, and it is very interesting to see what happens when we analyze this concept in somewhat the same way in which the concept of value has been analyzed by the logical positivists and the logical analysts.

Does truth have (1) a naturalistic meaning, or does it have (2) a non-naturalistic meaning? If truth has (1) a naturalistic meaning, this means that truth is describable in other than "truth terms". We find in philosophical literature, a number of meanings for truth that can be taken as (1) naturalistic meanings.

We have truth as (1.1) "rational intuition", the view of Plato, where the intellect, separated, as it were, from the senses, is able, finally, to grasp the pure ideas as they exist in the realm of forms. We have truth as (1.2) faith, the view of some Church Fathers who maintain that when faith and reason are incompatible, so much the worse for reason. We have truth as (1.3) logical intuition, the view of the rationalists who believe that we intuit self-evident principles from which we are able to deduce further truths. We have a variety of (1.4) empirical meanings of truth.

First there is (1.41) where truth is defined as a copy or reality, or as copies of impressions. Second, there is (1.42) the correspondence theory of truth, where truth is the correspondence between proposition and fact. Third, we have a variety of meanings of truth that can be called (1.43) pragmatic meanings of truth. There are possibly four main varieties of pragmatism. We have *alpha* (1.431), where the meaning of truth is defined as workability. If a belief works, then it is true, if it does not work, then it is false. Then we have *beta*, Schiller's form of pragmatism (1.432), where truth is defined in terms of satisfaction. Here,

a belief is true insofar as it satisfies. Then comes *gamma* (1.433), where truth is defined as verification. Because of the restricted nature of this definition, we have *delta*, the expanded meaning (1.434), where truth is defined as verifiability, and verifiability refers to actual verifications, physically possible verifications, and logically possible verifications. This meaning, as is well known, is found in Peirce, James, Dewey (with his phrase, warranted assertibility), and practically all of the philosophers who call themselves operationalists, positivists, or logical analysts adhere to it.

When we turn to the Romantic philosophers of the nineteenth century we find a new meaning (1.5) where truth is defined in terms of will, or feeling. Some of our modern existentialists, appear, from time to time, to accept this criterion for truth. And, for our purposes here, lastly, we have (1.6) where truth is expressed in terms of mystical intuition.

Let us examine a (1) naturalistic meaning of truth. As we have stated, a naturalistic meaning is describable in other than truth terms. For our example we select (1.434) where truth means verifiability. If we assert: truth means verifiability, and if this is a tautological expression, then it is trivial. No one will dispute that verifiability means verifiability. If the expression: truth means verifiability, is not a tautological expression, then it expresses a synthetic proposition. If the expression is a synthetic one, then, paraphrasing G. E. Moore's reasoning as it applies to goodness, we are forced to assert that truth is indefinable. We need not, as we shall indicate, be forced to say that truth is a unique, unanalyzable quality.

Following Moore again, we can raise the question with respect to verifiability, and ask, is verifiability truth? Moore should allow us to assert that this is a meaningful and significant question. Now, since this question about (1.434), the verifiability meaning of truth, can be raised with respect to all of the (1) naturalistic meanings of truth, it follows that none of the naturalistic meanings of truth can be reduced to naturalistic terms. Truth, in short, cannot be described in non-truth terms. Any attempt to do so commits the naturalistic fallacy.

And, although we have not analyzed the meaning of cognitive or non-cognitive, we believe that it is justifiable, here, to say that just as ethical expressions have been regarded to be non-cognitive, so also is it justifiable to assert that truth expressions are non-cognitive. But we are anticipating, because we must examine the (2) non-naturalistic meanings of truth.

II

There are two, or possibly more, (2) non-naturalistic meanings for truth. They can be invented along the same imaginative lines so well developed by our ethical intuitionists. For our purposes we shall limit our discussion to two examples. We have (2.1) where truth stands for a unique, unanalyzable quality, and (2.2) where truth is what ought to be believed.

Bertrand Russell, who probably during his life-time will assert all possible views about all the philosophical problems with which he concerns himself, has told us (MIND, N.S. XIII, 523-524), "It may be said—and this is, I believe, the correct view—that there is no problem at all in truth and falsehood; that some propositions are true and some false, just as some roses are red and some are white; . . . What is truth and what falsehood, we must merely apprehend, for both seem incapable of analysis." It is difficult to know how serious Russell was about this view, but since, at one time, he was convinced, by Moore, of the truth of the unique quality meaning of goodness, we perhaps can also forgive this youthful aberration concerning the meaning of truth.

We can be excused, we trust, if we dispose of this view with abruptness. With all due respect to Russell and Bosanquet (who found too many values in too many places), there are no adequate grounds, nor enough inadequate ones, to substantiate a belief in such a delightful fancy.

This brings us to (2.2), truth is what ought to be believed. This "ought" is not the unique ought feeling of Sidgwick or Ross, nor is it the "fitness" of Kohler or of Ewing, but it is a "truth oughtness" which finds expression in the autocratic minds operating in an authoritarian atmosphere. It was Herr Rosenberg, I believe, who was supposed to have said, "Jesus was not a Jew, it does not have to be proved, it is a fact". This is an example where the criterion of truth is, what ought to be believed. Another example might be an instance in which Stalin forgot about Marx and Engels, and as Bertrand Russell has expressed it, in *The Impact of Science on Society*, "Its latest manifestation is Stalin's refusal to believe that heredity can have the temerity to ignore Soviet decrees, which is like Xerxes whipping the Hellespont to teach Poseidon a lesson". History is filled with such examples that derive from political, religious, and yes, even philosophical autocrats.

It is well known how Santayana disposed of the unique quality view of goodness in his essay, *Hypostatic Ethics*; it is easy to imagine how easily one can dispose of the theory (2.2), truth is

what ought to be believed, if the need ever arises. So much for this meaning of truth.

Consequently, since (1) the naturalistic meanings of truth commit the naturalistic fallacy, and since (2) the non-naturalistic meanings of truth have no grounds on which they can be substantiated, we are driven to the emotive theory of truth.

III

The emotive theory of truth (3) states that all truth-value expressions, or truth-expressions, are, if properly analyzed, found to be emotive only. We could talk about (3.1) where truth-expressions express or evoke feelings, or about (3.2) where truth-expressions are hortatory, or (3.3) where truth-expressions are persuasive in nature, but for purposes of our thesis we shall lump the various possible combinations together, and speak as if we had but one (3) emotive theory.

Our position here can be made clear by stating a few of the well-known quotations selected from some of the proponents of of the emotive theory of good, and then paraphrasing them by substituting some epistemological terms.

A "But actually a value statement is nothing else than a command in a misleading grammatical form. It may have effects upon the acts of men, and these effects may either be in accordance with our wishes or not; . . . It does not assert anything and can neither be proved nor disproved."[1]

A[1] But actually a truth-value statement is nothing else than a command in a misleading grammatical form . . . It does not assert anything and can neither be proved nor disproved.

B "And we have seen that sentences which simply express moral judgements do not say anything. They are pure expressions of feeling . . ."[2]

B[1] And we have seen that sentences which simply express truth-value judgements do not say anything. They are pure expressions of feeling.

C "Our contention is simply that, in our language, sentences which contain normative ethical symbols are not equivalent to sentences which express psychological propositions, or indeed empirical propositions of any kind."[3]

[1] Carnap, *Philosophy and Logical Syntax*, p. 24.
[2] Ayer, *Language, Truth and Logic*, 2nd edn., p. 108.
[3] *Ibid.* p. 105.

C[1] Our contention is simply that, in our language, sentences which contain normative truth-value symbols are not equivalent to sentences which express psychological propositions, or indeed empirical propositions of any kind.

D "But in every case in which one would be commonly said to be making an ethical judgement, the function of the relevant ethical word is purely 'emotive'. It is used to express feeling about certain objects, but not to make any assertion about them."[1]

D[1] But in every case in which one would be commonly said to be making a truth-value judgement, the function of the relevant truth value word is purely "emotive". It is used to express feeling about certain objects, but not to make any assertion about them.

F "For we hold that one really never does dispute about questions of value."[2]

F[1] For we hold that one really never does dispute about questions of truth.

G "In short, we find that argument is possible on moral questions only if some system of values is presupposed."[3]

G[1] In short, we find that argument is possible on truth-value questions only if some system of truth-value is presupposed.

H "There cannot be such a thing as ethical science, if by ethical science one means the elaboration of a 'true' system of morals."[4]

H[1] There cannot be such a thing as epistemology, if by epistemology one means the elaboration of a "true" system of truths.

J "To give a descriptive definition of goodness to assign a descriptive function to the word 'good', is inevitably to take sides in the world in a very practical way. It is to throw your weight—and every sane human inevitably has some weight—in favour of the thing which you make the word 'good' describe."[5]

J[1] To give a descriptive definition of truth, to assign a descriptive function to the word "true" is inevitably to take sides in the world in a very practical way. It is to throw your weight—and every sane human inevitably has some weight—in favour of the thing which you make the word "true" describe.

[1] *Language, Truth and Logic*, 2nd edn., p. 108.
[2] *Ibid.* p. 100. [3] *Ibid.* p. 111. [4] *Ibid.* p. 112.
[5] Robinson, "Emotive Theory of Ethics", *Proc. of the Aris. Soc. Supp.*, XXII, 92.

This parallel between the emotive theory of good and the emotive theory of truth is quite revealing. The essential concepts of good and truth have escaped satisfactory analysis in the sense that a satisfactory analysis is one concerning which the experts are in agreement. And it seems to be the case that there are genuine disputes concerning the proper analysis of both good and truth. Further, both the meanings of good and truth tend to have different meanings in diverse cultures. And finally, both concepts are emotively charged.

One could argue, then, that the correct analysis of ordinary language leaves us with the doctrine that truth-expressions are emotive only. If we assert a proposition to the effect that such and such is true, we are expressing a feeling which says in its emotive way, " I believe, go you and believe likewise ". The expression " I believe " is not to be regarded as a statement of fact any more than the statement, " I find this good ", or, " I find that beautiful ", is a statement of fact.

An analysis of such expressions as " the Soviet Union will eventually lose out in the cold-war ", or " President Eisenhower is a more able politician than Senator McCarthy " are easy to interpret as expressions which are emotive only. And so also, truth expressions are emotive only. We must remember what Ayer has told us about moral questions, " In short, we find that argument is possible on moral questions only if some system of values is presupposed ". So also is it with truth questions. In short, we find that argument is possible on truth-value questions only if some system of truth-value is presupposed.

If one presupposes the system of Schiller based upon satisfaction, then we can have genuine argument ; if one presupposes (1.3) the meaning of truth based upon logical intuition (the coherence theory) then we can have genuine arguments ; if one presupposes (1.434) the verifiability meaning, then again we can have genuine argument. But one cannot ask for the " true " meaning of truth, any more than we can ask for the " true " meaning of good.

Let us repeat : To give a descriptive definition of truth, to assign a descriptive function to the word " true ", is inevitably to take sides in the world in a very practical way. It is to throw your weight—and every sane human inevitably has some weight—in favour of the thing which you make the word " true " describe.

The consequences to be drawn are several. We can accept the emotive theory of good, and if we do, it seems to follow that we should accept the emotive theory of truth. Or, two, we can reject the emotive theory of truth, and carry on our hunt for

the "Absolute Truth", and if so, we can start our hunt again for "Absolute Good". Or, three, we can do what the emotivists almost would do, but they cannot, because they have been caught with an epistemological bias—cognition, arbitrarily defined; that is, we could accept a relativity theory of good (see my "The Relativity of Value", *Journal of Philosophy*, Vol. XXXIV) and then take the logical step to the (4) relativity of truth.

IV

A (4) relativity theory of truth has considerable plausibility. Such a theory demands that we present some generic definition of truth in a manner that will allow us to set up our specific truth-systems. This can be done in several ways. We could define "Truth" as warranted assertibility, where this means only that on the basis of some designated criterion we shall consistently apply the term, "truth". Or we could say that "Truth" is the end of enquiry, where any end that is designated is the specific meaning of truth which we apply. For example, if we were to take (1.434) verifiability as our specific meaning of truth, then this would be our end of enquiry, or it would be in terms of verifiability that our specific use of warranted assertibility would take on definite meaning.

There would be a significant sense in which the definition: Truth is the end of enquiry, should be regarded as tautological. Yet, I think that if we were to examine all of the meanings of truth that have been proposed, we would find that they share the generic property, being an end of enquiry. But if one were to assert that there is one and only one end of enquiry, where, for example, verifiability is that end, then we would have to argue that there are inadequate grounds to substantiate such a belief.

For our purposes, let us assume that our non-naturalistic meanings of truth can be dismissed. Also, let us assume that the emotive theory of truth has short-comings. There are some difficulties here, but what we are asserting is that in some sense of adequacy we must accept some theory other than the emotive theory of truth. It may be that some one would wish to adopt a specific system of truth-value, in which truth is defined emotively, but there are not adequate grounds for asserting that the emotive theory of truth is the only adequate meaning.

Each naturalistic meaning of truth is for us not the only meaning of truth, but is only a specific meaning of truth. The error of philosophers is that they have presupposed that there is

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one and only one criterion of truth. This is not quite the case because some philosophers have admitted two kinds of truth, one based on the criterion of validity, which holds in the realm of formal logic and mathematics, and a second, verifiability, which holds in the realm of empirical enquiry.

Let us, then, re-examine some of our (1) naturalistic meanings of truth so that we can see how they apply in our relativity scheme. Also let us accept as the generic meaning of truth (4) End of Enquiry. Plato's end of enquiry, hence Plato's specific meaning of truth (1.1) rational intuitionism, is a criterion which will bring an end to enquiry, when the eternal forms are grasped in their purity. (We need not worry, here, about the actual existence of the realm of ideas.) Plato's error is his belief that his criterion is the only proper criterion for truth, but in our relativity scheme, it is a specific criterion that can be used, if one so desires.

Those who accept (1.2) faith as the criterion for truth, and argue that this is the end of enquiry, and the only end, fall into the same kind of error that Plato does. But no matter how repugnant it may be to some empiricists, there can be no doubt that belief by way of faith does bring an end to enquiry.

We need not examine all of the remaining naturalistic meanings of truth, but let us look at (1.434), the verifiability meaning of truth. Those of us who are brought up in the tradition of empiricism with its emphasis upon scientific methodology, accept, as the end of enquiry, verifiability. When propositions are verified, then enquiry stops. We are interested in an end of enquiry by means of which we can make verifiable predictions, we are interested in an end of enquiry that has brought to us a body of knowledge which we call scientific knowledge.

What is it that we seek as an end of enquiry ? If we seek to resolve our intellectual conflicts through the comprehension of ideas as they are supposed to exist in the realm of forms, then we should follow (1.1) the criterion for truth given to us by Plato. If we seek to resolve our intellectual conflicts in terms of beliefs based upon (1.2) faith, then we should accept the criterion for truth such as have been advocated by some of the Church Fathers, who tell us that if reason and faith are in conflict, then so much the worse for reason. If we seek to bring an end to our intellectual conflicts by way of the verification of propositions then we should accept (1.434) the meaning of truth which is defined as verifiability.

The interesting question, perhaps, is : What basis do we have for accepting one criterion for truth rather than another ? It will not help to assert that knowledge is the basis, because this

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either begs the question or it is circular. It should be clear that our basis for accepting one criterion for truth rather than another depends upon some will-attitude, some interest, some arbitrary fiat, something that is describable in non-rational rather than rational terms. This means that since we are products of our culture, it will be values in our culture that will determine the criterion of truth to be accepted.

It will be noted here that there is some similarity between the emotive theory and the relativity theory—the grounds upon which we accept our specific criterion of truth are emotive; they are non-cognitive, in the sense that the emotivists use the term, " non-cognitive ".

We can envisage the day, if man uses nuclear energy for the happiness of man, rather than for his extinction; and when the production of man's wants are proportionate to man's needs; then we will have a push-button society to take care of man's material and perhaps many of his intellectual wants. If such a society comes into being, people will become creators and appreciators of art in all of its forms. The development of aesthetic creativity and sensitivity will move us on to a new epoch in which the criterion for truth will be what we may call (1.7) aesthetic empiricism, where intellectual conflict, if there be such would be resolved by way of the aesthetic experience. Perhaps Keats knew what he was talking about.

And if one wishes to over-use the crystal ball, he can anticipate even another new order where the end of enquiry will give rise to a further criterion of the meaning of truth, (1.8) extra-sensory perception. Heaven forbid!

In closing, we should remark that the problem of goodness and the problem of beauty can be handled most adequately in terms of a relativity doctrine. And if our logical analysts and our logical positivists insist upon their emotive theory of value, then for the sake of consistency, I suggest that they accept the emotive theory of truth. Truth, after all, is a normative concept.

The consequences of an emotive theory of truth, or a relativity theory of truth are not drastic at all. We are living in a scientific epoch, and we will continue to define knowledge in terms of scientific methodology, and will continue to define truth as (1.434) verifiability. But after all, it is only sporting to recognize our own bias, no matter the intensity of our particular preference.

If " it is clear that ethics cannot be expressed ", then it is clear that truth cannot be expressed.

University of British Columbia.

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VII.—DISCUSSIONS

THE IDENTITY OF INDISCERNIBLES

A.[1] I'm not satisfied with your refutation of the principle. You seem to think that, because your imagined universe contains only two exactly similar spheres and nobody to name them, therefore I who am outside it cannot name them either. But why shouldn't I? I could paint a picture of your universe, stand before it, name the two spheres and then make my point, that Castor has a property which Pollux hasn't got: *being two miles from Pollux.*

B.[1] That won't do, because that phrase has no meaning in a universe in which the name "Pollux" hasn't been given to one of the spheres. And it's no good trying to give it a meaning from outside, as if you were somewhere just beyond the frame of your picture. For this is a picture of a universe. There's nothing outside it, and inside it I've said that there is nobody to do what you want to do.

A. But, although there isn't anybody, there could be. So the phrase could be given a meaning.

C. Quite right. *B* has forgotten that the two spheres have differentiating properties for which meaningful phrases could be contrived.

B. All right. I'll let *A* into my universe, provided that he is matched by an exactly similar twin. But now I merely stipulate that they both always use the same name for exactly similar spheres. Or, if this seems too complicated, I'll switch to a simpler counter-example.[2] Imagine an infinite series of exactly similar sounds succeeding one another at equal intervals with no first or last term. Otherwise the universe is empty, until I let *A* in. But I let him in only on condition that he gives all these sounds the same name, has always done so and will always do so.

A. But, whatever I do, I still might do something else. And, if I named the sounds differently, this would give meaning to the phrases for their differentiating properties.

B. But these differentiating properties don't exist until the sounds are named differently.

A. I disagree. Suppose I called all the sounds "σ". Then I admit that "being the successor of σ" wouldn't be a phrase for a differentiating property. But it doesn't follow that there is no differentiating property to which this phrase could be assigned. There is. And, in order to assign this phrase to it, all I need to do is to use "σ" as the name of a sound once and once only. You

[1] For these two characters see Max Black, "The Identity of Indiscernibles", MIND, April 1952, especially p. 159.

[2] Adapted from a counter-example devised by Ayer, "The Identity of Indiscernibles", *Actes du XIème Congrès International de Philosophie*, iii (1953), 128.

cannot argue a differentiating property out of existence merely by stipulating that there is no phrase for it.

B. But, if you called all the sounds σ, which sound would have the differentiating property which you have in mind ?

A. I haven't got a particular differentiating property in mind. I only have a phrase which could be assigned to any differentiating property. And which one gets it, will be decided by the unique assignment of "σ". You mustn't think that each differentiating property is waiting for a particular phrase, since that would entail that each sound was waiting for a particular name. On the other hand, if you infer from this that the differentiating properties don't exist, you might as well infer that the sounds don't exist. For it's the same inference.

C. I detect futility. *A* is defending a trivial form of the principle, which *B* is mistakenly attacking. *B* can exclude different names from his universe: but he cannot exclude their possibility without contradicting his hypothesis that there are different sounds. If *A* wishes to defend the principle in an interesting form he should not rely on property-phrases whose meaning is explicable only by reference either to unique names or to demonstrative words.[1]

A. I'm prepared to defend it even in this form.

B. And I to attack it. Nameability will now be irrelevant. In fact *A* may actually give the sounds different names if he wishes. For properties based on these names will no longer count against the indiscernibility of the sounds. Yet surely they will not be identical. Really I can't see how *A* can defend the principle in this form.

C. Wait. If you allow *A* actually to give the sounds unique names there is a point which we ought to clear up before we go any further. "Called σ" might not be taken to be a description which, for logical reasons, designates uniquely; since "σ" could be used again. But on the other hand, that description would in fact designate only one sound. So *B* should insist either that all the sounds be called "σ", or else that the description be phrased "called by the unique name σ". For the point of *B*'s counter-example is to distribute to every individual all properties which are not unique for logical reasons.

A. Yes. But I wasn't going to take advantage of that loophole. What I want to know is: if the principle is false, how could I ever justify the assertion "They are two different things" ?

B. On any theory this is a pleonasm. But I don't see why I should find any particular difficulty about its justification. You might see the two spheres simultaneously, or hear one sound cease before the next began. And you can't fall back on the differentiating descriptions "Seen on the left by *A*" or "Just heard by *A*", since these involve your name. And, if you replace your name by a general description, this will have to contain spatial co-ordinates in the first counter-example, and a date and a time in the second, both needing

[1] *Cf.* the stipulation made by Ayer in his discussion of the principle. *Loc. cit.* p. 126.

points of origin which you could not be absolutely sure of describing uniquely without thereby disqualifying the original differentiating descriptions (because then they wouldn't make the two things discernible, in the sense of that word which we are now discussing).

C. Yes. It's *A* who is in a difficult position now. Let us distinguish here between two senses of "discerning two things". It might mean "telling that there are two things": or it might mean "telling which is which". Now the latter is sometimes done in a purely general way. In *B's* counter-examples it can't be done in a purely general way. But it doesn't follow that it can't be done at all: it might be done by co-ordinates. Still less does it follow that it would be impossible to tell that there were two things. For this doesn't even need co-ordinates, unless you choose to say that each man carries his own personal co-ordinates with him.

B. If *A* did tell which of the two spheres was which by co-ordinates, he would not be discerning them in the sense in which I am maintaining that they are indiscernible. The non-general element in their differentiating properties would merely be shifted to the point of origin. For a purely general description of the point of origin would be inadequate, since, however elaborately it were marked, an exactly similar mark would exist elsewhere in my universe. So map-readers might always be deceived by such duplicates; and similarly readers of chronicles could never be sure of identifying the beginnings of eras, however striking their opening events.

A. I've already agreed not to appeal to differentiating properties which are not purely general. I don't want to argue that your non-identicals are discernible in the sense in which we are now using that word. But, being in this sense indiscernible, how can they be non-identical? How could one tell that there *were* two? In your counter-examples this certainly seems possible. But that is only because you began by saying that there were two spheres and many sounds. Perhaps, however, the concept of plurality ought not to be extended to universes which contain only exactly similar things. Maybe we succeed in imagining your universes only because we surreptitiously introduce into the first some asymmetry, and into the second some non-recurrent feature. If we don't do this, possibly we only think we can imagine them. I am driven to make these suggestions because the mere telling that there are different things seems to depend only on difference in substance, which is no help because it is undetectable.[1]

B. I didn't appeal to anyone's success in imagining my universes, but simply to the fact that their descriptions contain no logical faults. For we don't call exactly similar things identical. I know that this is a pleonasm, and that it sounds as if I justified our usage by merely stating what it is. But I am not relying on such tricks.

[1] *Prima facie* arguments brought forward by Ayer for the principle. *Loc. cit.* pp. 127-129.

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Our usage results from, and is justified by our ability to tell when we are confronted by exactly similar things, and to count them. I begged no questions in presenting my counter-examples. I merely spoke in an established way. You, on the other hand, are suggesting a novel criterion of identity, a criterion which wouldn't be completely acceptable even if exactly similar things nearly always coalesced. ("If they *always* coalesced" would merely be a paradoxical way of saying "If it was the exact opposite of one of my universes".) For even then there would be a word "x" such that one thing sometimes had two exactly similar x's.

A. But what about my reason for mistrusting your universes?

C. There is nothing in it. We can notice a thing and say "This" at it without being able to describe it in a purely general way. And we can tell that we are seeing two things, and say "This" at one and "That" at the other without being able to describe them, and so *a fortiori* without being able to describe them differently in a purely general way. You think that *B* must be appealing to an unknowable difference between two substances only because you mistakenly think that all reference involves deep and unattainable description (purely general: please understand this from now on). This is also the reason why you suspect that we cannot imagine *B*'s universes unless we introduce some asymmetry into them. But it's a bad reason. Substance is the ghost of description conjured up by your prejudice against mere reference.[1]

A. Perhaps the contingent fact that things are seldom exactly similar makes you exaggerate our powers of recognizing mere plurality.

C. No. It's just this fact which makes you overlook this power.

A. Maybe. But let's argue. I won't mention substance again. But surely *B* is relying on "bare particulars", which are logically contradictory,[2] or on "thisness",[3] which is undetectable.

C. Admittedly physical analogies are misleading here. It would be absurd to infer that, because you cannot remove all the qualities from a thing, therefore there must be something from which you cannot remove them all. But *B*'s thesis doesn't involve this absurdity. He only says that in his universe we could refer to two different things and know that they were two. You, however, although you no longer mention substance, still persist in the same mistake. A thing doesn't need to have a "thisness" before we can say "This" at it intelligibly. There merely has to be the right context: there merely has to be the thing.

A. But how do you know that *B*'s universe contains contexts in which we could say "This" at one thing and "That" at another intelligibly?

[1] *Cf.* Strawson, "On Referring", MIND, 1950, p. 339.

[2] *Cf.* Sellars, "Particulars", *Philosophy and Phenomenological Research*, December 1952, p. 184.

[3] See references given by Popper, *Proceedings of the Aristotelian Society*, Supplementary volume xxvii, p. 100.

C. You are only asking how I know the *B*'s universes each contain at least two things. Because he said so. And it wasn't a logical conjuring trick. Anybody could have said it. It contains no logical faults.

B. I don't see what more can be said. *A* is reluctant to give up the idea that the ability to tell that one is seeing that there are two things must involve the ability to describe them differently ("On my left" and "On my right" don't count as differentiating descriptions for the purposes of the argument). He will have it that the suggested context for the intelligible use of "This" and "That" is either incompletely described or else inadequate. *C* rightly rejects both contentions.

A. But I'm afraid I'm still not convinced. You are both asserting that there is such a thing as mere recognition of plurality. The two spheres, you say, could be seen to be two because they could be seen to occupy different positions. Now I agree that the co-ordinates of the man who sees this could be independent of any system whose point of origin was described in a purely general way,[1] and, in *B*'s universe, they might as well be since such a system would be useless there; and I agree that this doesn't make it any *more* difficult for the man to tell that there are two spheres. But it's already impossible: for, *before* he can say that they occupy different positions, he must *first* notice that there are two. And I ask again, at a deeper level now, how he could notice this. Surely he couldn't.

C. But you cannot reduce our thesis to absurdity in this way. For you have to rely on a misleading analogy which we don't accept. If *B* created his universe, he would first create two spheres and then, perhaps, colour them. But he wouldn't first create two spheres and then put them in two different places. Location is not a quality. This is, I suppose, the reason why "particulars" are sometimes identified with points in space.

A. Do you mean that telling that there are two things *is* noticing that they occupy different positions?

C. Not quite. But it always could be done in this way at least for material objects.[2]

A. But don't we have to decide that there are two things before we measure the distance between them?

C. Certainly. But not before we notice that they are not in the same place.

A. Then why is the sentence "They are not in the same place" not a pleonasm?

C. Because it doesn't mean "They are not in *exactly* the same place".

[1] *Cf.* Popper, "The Principle of Individuation", *loc. cit.* p. 111-112

[2] *Cf.* Locke, *Essay Concerning Human Understanding*, Bk. II, c. 8, s. 9.

A. Then you agree with Wittgenstein that "Russell's definition of '=' won't do; because according to it one cannot say that two objects have all their properties in common (even if this proposition is never true, it is nevertheless significant)".[1]

B. Yes.

C. Provided that "indiscernibility" is not interpreted as we interpreted it at the beginning of this conversation.

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[1] *Tractatus Logico-Philosophicus*, 5. 5302.

ARE "INDUBITABLE" STATEMENTS NECESSARY?

ARTHUR PAP has contended that "(There are) . . . existential statements (which) . . . may be properly said to be indubitable, or certain. (That is) . . . their truth *necessarily follows* from their meaning".[1] As an example of such a statement, he offers 'There exist red surfaces', since, if "(it) were false it would be unintelligible and insignificant. . . . A term like 'red' can be defined only ostensibly . . . hence in a universe containing no red objects or surfaces, 'red' would be meaningless and the existential statement 'There are red surfaces' would not be just false, but strictly insignificant".

In his second note,[2] a defence of his first presentation against the criticism of Mr. Rollins, he has re-stated his position by saying, "All I need to prove the existential statement 'There are A's' is the premise that 'A' is ostensibly-definable; whether 'A' is also verbally definable is irrelevant".

This second expression of his position may be given, in general form, as follows:

(1) ('P') ['P' is ostensively-defined $\supset (\exists x)\mathrm{P}(x)$].

The issues, therefore, may be presented as follows: (I) is thesis (1) true? (II) If thesis (1) is true, are there "indubitable" statements?

I

Now, thesis (1) would be tautological, therefore true, if it could be shown that the expression 'ostensively-defined' must be explicated in such a way that the sentence-form '$(\exists x)\mathrm{P}(x)$' (hereinafter termed '(B)') follows from "'P' is ostensively-defined" (hereinafter termed '(A)'). Needless to say, a sentence-form like (1) will not be taken as analytic unless such a (plausible) explication is forthcoming. A synthetic implication, of course, will not establish Pap's thesis.

Perhaps one way of defining 'ostensively-defined' in-use is the following:

(2) For any 'P', 'P' is ostensively-defined, by any y, for any x, if and only if there is an instance of 'P', z, y points to z and utters 'P', and x hears 'P', sees the pointing-to-z, notices z.

For the edification of those who delight in logical notation, I will present the former in the following form, using Reichenbach's

[1] A. Pap, "Indubitable Existential Statements", MIND, lv, July 1946.

[2] A. Pap, "Ostensive Definition and Empirical Certainty", MIND, lix, October 1950.

formulation of " event-splitting " [1] to express the phrase ' sees the pointing-to-z ' :

(3) (' P ')$(x)(y)${Ost-d(' P ', y, x) ≡
$(\exists z)(\exists t)$[P(z) . Pts(y, z, t) . Ut(y, ' P ', t) .
H(x, ' P ', t) . Se(x, (ιv)[Pts(y, z, t)]*(v)) .
No(x, z, t)}

But I am not sure whether such a formulation is a correct one. It does not, for example, include the case wherein we define some term ' P ' by pointing to instances of ' not-P '. For example, it is feasible to define a colour by pointing to blue, green, pink, brown and yellow things, together with square, round, shapeless, rough things, and so on, saying " *Not* this " in each case. Or, we could give an ostensive definition of ' Mr. Thruppingham ' by saying of each man emerging from a men's club, " *Not* that one ". Under suitable conditions, by such negative-ostensions, the meaning of ' P ' becomes fixed. It becomes fixed, of course, in a very round-about and complicated manner. In the case of Mr. Thruppingham, we discover who *he* is by virtue of the fact that we know (*a*) Mr. Thruppingham is a frequenter of the club, (*b*) that we have seen (that is, had negatively-defined) all frequenters of the club *other* than Thruppingham. We are then left with the condition that ' Mr. Thruppingham ' designates any *new* man seen to emerge from the club.

If we wish, we may insist that ' Mr. Thruppingham ' has not been fully ostensively-defined, by such a negative process, *until* Mr. Thruppingham does emerge from the club, to be seen by x; but this condition is disputable. Similarly, in the case of the colour (which, surprise ! turns out to be red), we can say that it has been ostensively-defined by the negative process, although some will insist, as Mr. Pap may, that the process is not completed until an occurrence of red is seen by x, and he recognizes it to be *not* an occurrence of blueness, squareness, or of any other quality shown him and rejected. However this may be, it seems established that there is a process of negative-ostension, and that not everyone will insist that an instance of ' P ' exist, in order for ' P ' to be defined ostensively by pointing to *not*-P's.

If this argument is tenable, then it need not at all be true that (B) is true. However, if it is insisted (on what grounds ?) that ostension, even by this negative process, is not complete until presentation to x of an instance of ' P ', then (1) *is* analytic, providing that either (3), or the " negative form " of it, is justified, and has an instance.

II

But proving (1) to be analytic does not establish the conclusion that there are " indubitable " existential statements. For it is not

[1] H. Reichenbach, *Elements of Symbolic Logic*, Macmillan, N.Y., 1947, pp. 269 ff.

established, on the grounds of (3), or any alternative definition, that (A), the implicans of (1), has an instance. Accordingly, it does not yet follow that (B) is true.

There is no question as to whether 'red' *has*, at various times or other, been ostensively defined. In fact, this is equally true of 'horse', 'Mama', 'furniture', and so on. If this is so, then, by thesis (1), there *are* existential statements for which there is logically-conclusive evidence. That is, this is so if (A) is itself *conclusively* true: for a statement cannot be itself certain if entailed by, and only by, statements themselves less-than-certain. The fact that we remember having ostensively-defined 'red', or some other term, however, does not establish the "conclusive" truth of (A), and so there is, neither, logically-conclusive evidence for (B). One *need* not suppose, then, on these grounds—though he may perhaps be forced to on other grounds—that there are existential statements of a particular sort which are not only true, but "conclusively" true, "indubitable" or "certain".

Indeed, we would not have to restrict discussion to the problem of ostension in order to consider whether statements of the form (B) are "conclusively" true: any "conclusively" true empirical statement (E), which entails a statement of the form (B), establishes —by Pap's usage of the term—an "indubitable" statement, or a "conclusively" true one.

Thus, the whole problem hinges on whether there are "conclusively" true statements like (A), or of any other sort (E), which entail (B).

Empiricists in general have long claimed, and Pap himself admits, that synthetic statements cannot be said to be "conclusively" true or "certain" (I assume that Pap uses these terms interchangeably); rather, all such statements have some degree of probability, hence by inversion some degree of improbability, attached to them. Of subclass (A) of empirical statements in general, Pap maintains, contrary to some empiricists: (*a*) that these statements, *if* true, are "conclusively" true; (*b*) that some occurrences of these statements *must* be true.

The first of these two problems, it would seem, is the more significant of the two. For it might well be granted that some terms *must* be ostensively defined, hence that some assertions that a term *has* been ostensively-defined *must* be true. Yet this alone would not establish the fact that these sentences (A) are *conclusively* true. But unless some instances of sentences of the form (A) are "conclusively" true—whether or not some *must* be true—then (B) itself cannot have "logically-conclusive" evidence.

To be sure, we are here confronted with a puzzle about terms. What do we mean, what *can* we mean, by 'conclusive truth' and by '*must* be true'? I shall assume, for the moment, that when something "must" be true, it is true either by virtue of analyticity, or by entailment from an "indubitably" true sentence. Now an

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" indubitably " true sentence is itself either analytic, or one which is " conclusively " true. Hence, the issue which Pap is defending rests upon the contention that some sentences of form (A) are (i) analytic, *or* (ii) entailed by a " conclusively " true sentence, *or* (iii) " conclusively " true themselves.

I am not sure what content can be given to the term ' conclusively true ', which distinguishes it from ' analytic '. Yet it is evident that no sentence of the form (A) is analytic, since tautologies cannot entail synthetic statements. And so we have not yet succeeded in showing how (B) can be " indubitable ".

It will not do to appeal to the argument that by " knowing the meaning of ' red ' " one understands that ' red ' *must* be ostensively-defined. For if the meaning of a term gave a clue as to how the term *acquired* its meaning, then ' horse ' would signify not only horses but also linguistic definitions (or ostensive-definitions, for some people). On such a view, for these two classes of people, " ' Horse ' entails ' Horse is linguistically-defined ' " and " ' Horse ' entails ' Horse ' is ostensively-defined " must be analytic, respectively, and for some people both would be analytic. I am sure that I hold neither to be analytic.

In any case, assuming that by " knowing the meaning of ' red ' " one *did* understand that ' red ' must be ostensively-defined, this contention would have to be presentable in formal terms. I am not at all sure how this is supposed to be done.

To be sure, Pap speaks of the " semantic rules " which fix the meaning of terms like ' red ', and he likens them to the rule which equates ' bachelor ' with ' unmarried man ', by use of which ' All bachelors are unmarried men ' is provable as analytic. But Arthur Pap, while freely using the term ' rule ', coupled in this case to the term ' semantic ' (as though that made all things clear), does not show that " semantic rules " establish formulae usable in a logical deduction, as do linguistic definitions (" rules ") like ' bachelor $=$ *df* unmarried man '. In short, Pap has not demonstrated the analyticity of (A), though by comparing it with the case ' All bachelors are unmarried men ' he suggests that this is what he means to assert.

Let me suppose, as a possible formulation of such a " semantic rule " the following:

(4) $(x)[\text{red}(x) \supset (y)[\text{`red'}(y) \supset \text{Names}(y, x)]]$.

Now, if ' red ' occurs at all as an entity (it has, just now), it names or refers to red, by virtue of (4). Hence one can deduce from (4), in conjunction with (5), $(\exists y)$ ' red ' (y), the conclusion (6) that (y) ' red ' $(y) \cdot$ Names (y, x). But neither from (6)—which is empirical, and not " indubitable ", or from (4), together or separately, is (A) deducible, and so there is reason to suspect the supposition that a " semantic rule ", like the rule ' bachelor $=$ *df* unmarried male ', allows one to deduce a " conclusively " true statement, if not a tautology.

Furthermore, there is reason to suspect " semantic rules " like (4). For (4) states a relation holding not between an object-language term and a non-linguistic thing, as one would expect of a " semantic rule ", but between a metalinguistic term and one occurring in the object-language.

This brings us to consider one of the other possible ways with which one could look upon (A). This second possibility is that it is entailed by a " conclusively " true statement, and thereby it becomes " conclusively " true itself. What sort of statement is it that could be taken as the entailing-implicans of (A) ?

There are, of course, an indefinitely large number of such logically-possible implicans, but it turns out that all must be statements which *justify* or prove the thesis that ' red ', or some such term, must be ostensively-defined. I am not sure what the best, or most convincing form of such a statement will be, although Pap may perhaps have an idea about the matter since he supports, or has supported, the view that ' red ' *must* be ostensively-defined. Whatever the contents of the statement may be, it is a synthetic statement, since tautologies do not entail synthetic statements. Being synthetic, it is possible to suspect that it must have some measure of improbability, hence of less-than-certainty. Now, Pap might wish to absolve it of suspicion of such frailty by contending either that it is a statement like (A) in form ; or that it is a statement of a form other than (A), which is not possibly-false. But it cannot be (A), since this would raise the same issues over again, with a resultant infinite regress. On the other hand, it is not easy to see how any other statement could be so unassailable, regarding doubts as to its truth.

Perhaps a statement like (7) ' All names of sensory experiences must be ostensively-defined ' would be such a " justification " : it seems to be not remote from the positions expounded by some philosophers. But, in fact, (7) fails to meet the qualifications on at least two grounds : (*a*) it alone does not entail (A) ; (*b*) ostensive-definition, as earlier defined, is a process involving a physical event *external* to the knower, a pointing-to, and so on ; it makes no sense, then, to speak of " defining the names of sensory experiences " as distinguished from defining the names of horses, Mama, and candlesticks, which also may be pointed to, giving rise to sensory experiences coupled with the uttering of the name.

There are doubtless several different reasons, or causes, which have led some philosophers to suppose that some terms, like ' red ', *must* be ostensively-defined, and that therefore ' ' Red ' is ostensively-defined ' is " indubitable ". One of them is, that I do not " know " red until I experience it directly, hence the meaning of ' red ' can be given only through an ostension which leads to such a direct experience of red. This entails ' red ' is not *also* definable linguistically in such a way that classes of those presented one definition always agree with the users of the other, in circumstances

where redness is detectable by both ; this entailed consequence does not seem *certainly* true.

Thus, either an occurrence of ' red ' does not permit one to say, necessarily, that it has been or must have been ostensively-defined, and therefore (A) is not " indubitable " ; or, ' red ' *must* be defined ostensively. Hence, to prove (B) " indubitable ", as Pap seeks to do, it is necessary to prove that some premise wherefrom (A) is deducible, is itself *conclusively* true, but not analytic. So far, no such premise has been presented, nor has it ever been demonstrated that it is devoid of any suspicion of improbability. In fact, we have seen how it is possible to say that (B) is " conclusively " true by virtue of entailment by a " conclusively " true statement ; but what a statement " conclusively " true " in itself " can be, has not yet been explained, nor has the concept ever been defined, though " examples " of such " indubitable " empirical sentences have sometimes been presented despite the failure to present an analysed concept of which they are supposed instances.

LESTER MECKLER

METAPSYCHOLOGY

MR. WOLFF'S note [1] on Professor Ryle's treatment of agitations in *The Concept of Mind* is complicated.

I seem to discern through the philosophical twilight (but the effect may be due simply to my logical astigmatism) three Mr. Wolffs. Mr. Wolff I—to the top of page 241—is a romantic, nihilistic character, who tells us in effect that there can be no such thing as the explanation of human behaviour. Mr. Wolff II—of the last two paragraphs—would stop this rot by the reintroduction of Rational Psychology: he is a solemn and conservative figure. Mr. Wolff III is a reasonable man, who has left the trace of a momentary appearance in the prepenultimate paragraph; but his stature is dwarfed by that of his companions, and his voice, like that of most reasonable men, is lost amongst their vociferations. But before pursuing my acquaintance with this surprising trio, I must say something of the book which, with the charms of analogy and amid the thunder of multiplied example, has evoked them from the metaworld.

The strange thing about *The Concept of Mind* is that, at a time when much empirical work is being done on inclinations, agitations and the like, Professor Ryle can treat these topics as if no such work existed; and then, in the guise of the logical analysis of mental concepts, venture a large number of psychological hypotheses of his own in a thoroughly *a priori* way. Thus, in the present instance, he tells us that 'an agitation requires that there exist two inclinations or an inclination and a factual impediment'. This by no stretch of the imagination which I can achieve can be construed as the logical analysis of the concept of agitation. It is, if anything, an empirical hypothesis; but it is one which is so vague as to be almost useless. If anything is to be done with it, the meanings of such terms as 'inclination' and 'agitation' must first be made very much more definite than they are in their ordinary uses. Such concepts of commonsense point roughly in a certain direction—roughly, but, together with the circumstances, accurately enough for the purposes of daily life. In the same sort of way, the concept of warmth/coolness, as tested by touch, works well enough when we are dealing with soups and baths. But if, with Professor Ryle, we seek to formulate the psychological analogues to the law, say, of falling bodies, we must do for such concepts as inclination and agitation what the seventeenth century did for such concepts as warmth or time or force: find operational criteria by which, whether directly or indirectly, we can locate precisely and uncontroversially that which the commonsense concept vaguely and doubtfully indicates. We must find some concept, X, which stands

[1] MIND, April, 1954.

to inclination as temperature stands to warmth/coolness; and this, of course is just what contemporary psychologists are trying to do. The mental concepts which Professor Ryle purports simply to analyse are nothing sacrosanct. They are the vague and confusing outcome of often very ancient and always unsystematic, overlapping and uncompleted efforts in the same direction. By 'analysing' them and reporting the results in such sentences as the one which I have quoted, Professor Ryle is just—for whatever reason—giving his blessing to some items of this venerable mental lore, and anathematising the rest. I cannot believe that this is a profitable exercise. For there are large numbers of very able people in the world who are entirely occupied in revising this lore, in introducing some kind of order into the chaos which we have inherited. The philosopher can certainly do something to help with this work. New developments in science are always impeded by old habits, and philosophers have, by special training, the proper arts to speed the dissolution of those habits. Is there any doubt that they can do so as usefully with respect to psychology in the twentieth century as, in the seventeenth century, Descartes and company did with respect to physics when, for instance, they showed that there was no indissoluble link between the aristotelianism which they wished to reject and the christianity which they wished to preserve? But logical analysis, when it does not work with such actual scientific thought as there is, works, as a matter of brutal fact, with whatever remnants of earlier science are preserved, often as fossils, in the many incompatible strata of which ordinary languages are composed. The 'analysis of ordinary language' is but old metaphysics writ smart; and impedes a genuine investigation of the world, when such a thing is on the way, no less than its more pompous parent.

The Concept of Mind has, notwithstanding, done great service. If he has passed the detail of psychology by, Professor Ryle is aware of its general situation. The traditional psychology, against which our contemporaries are fighting free, is, like the physics from which Newton fought free, a science which explained by occult qualities; but whereas only alchemists and magicians claimed direct and privileged access to those occult qualities in physical things (and so claimed to bend them directly to their will), the traditional psychology held that each of us, and without magical incantations, had such an access to our own qualities. These were occult to the rest of the world, but not to us, severally. In castigating this magical view of our knowledge of mind, in helping to banish animism from psychology as it has long been banished from physics and chemistry, Professor Ryle is working in a great tradition. He is doing for psychology what Locke did for physics in providing general philosophical support for Newton's *hypotheses non fingo*—only he would have done it very much better had he analysed in relation to detailed work in progress in the field. He then could easily and effectively have shown how psychology is still in a state of war,

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with those who, turning their psychology constantly into metaphysics, still succumb to occult qualities, on the one side; and those who are struggling to make an end of hypotheses (in Newton's bad sense) on the other. Then, by taking up the proper position of the philosopher above this struggle, he would not have been tempted to produce any *a priori* psychology of his own, and so would not have frequently joined, as surely he never wished to do, the ranks of the metaphysical party. Freed from that bogus allegiance, he would have been able to strike his powerful blows for psychological empiricism not at random, but where they would have had most effect, in the chinks of the metaphysical armour of its opponents. This is what empiricist philosophers who are interested in psychology should now do; and they could do a lot of good.

But this is not Mr. Wolff's route. He prepares to attack Professor Ryle on purely logical grounds. He says that Professor Ryle's explanation of agitations in terms of the conflict of inclinations with each other and with circumstances 'involves an essential hypostatisation of motives, or inclinations, which he has earlier construed as nothing more than particular types of complex dispositions'. This, if true, would mean that Professor Ryle's account of agitations is incompatible with his general attack on occult mental qualities, and hence, presumably, must be rejected. But what reason is given for the assertion that Professor Ryle's account of agitations involves 'an essential hypostatisation' of inclinations?

At this point, Mr. Wolff I enters with a metaphysical flourish, roundly asserting that 'motive-words do not single out essentially discrete portions of a person's behaviour, but rather are vague, general characterisations of arbitrary sections of his entire pattern of actual and hypothetical actions'. This means, I suppose, that when we investigate the reactions of people to their environment, we can find nothing even remotely like the multiplicity of discrete dispositions by which we successfully characterise physical objects—as the colour, density, malleability, conductivity, fusibility etc. of copper. Hence, *a fortiori*, we cannot explain an event or state as the joint effect of two or more dispositions, as we might the bounce of a ball by the elasticity of rubber and the ageing of rubber. All we can do, according to Mr. Wolff I, is apparently to compose an indefinitely long list of things done to and by a person. No explanations, even of the most rudimentary 'natural history' kind are possible for any items in this list. In other words, Mr. Wolff I refutes Professor Ryle's account of agitations by relying on the statement: no explanation of human behaviour is possible. The less said about this the better.

But Mr. Wolff II, of the last two paragraphs, has a very different tale to tell. 'Somehow it seems absurd to suggest that our feelings and actions occur haphazardly, without the slightest possibility of giving more than a "blow-by-blow" account of them as they happen'—that is, of giving more than the above-mentioned list.

And what else has Mr. Wolff II to offer ? A recurrence to necessary connexions and continuity of emotions, a recurrence, in fact, to hypostatised dispositions, to occult qualities ! According to Mr. Wolff II, therefore, Professor Ryle is still inconsistent : he attacks hypostatisation, and yet, when he comes to deal with agitations, hypostatises all the same. But whereas Mr. Wolff I apparently sides with the general attack on occult qualities, and hence (on his own principles) rejects the account of agitations ; Mr. Wolff II believes in occult qualities, therefore presumably countenances, so far as its general principle goes, the account of agitations, and rejects the main argument of the book.

This is vertiginous.

Happily, Mr. Wolff III, of the prepenultimate paragraph, renews our hopes. He says, ' the analogy of the stream and currents is an unhappy one, for it creates the impression that there are natural lines of behaviour which constitute certain " motives ", just as certain lines of water make up currents. Ryle succumbs here to the same temptations which led earlier philosophers (and Mr. Wolff II !) to postulate mental and physical substances '. Mr. Wolff III here begins to reveal the assumption which gave rise to the other and horrid members of the trio.

I do not know if the analogy of stream and currents is unhappy, but it is certainly dangerous. It is full of potential metaphysics, of *a priori* psychology ; as full, though not more so, as ' electric current ' or ' light waves ' are full of potential *a priori* physics. There is indeed nothing wrong with these analogies as such. They can be and have been both heuristically and pedagogically useful. Only, they can easily be abused ; can be treated, not as useful aids to discovery and understanding, but as the metaphysical termini of understanding ; and I think that Mr. Wolff III is right in suggesting (as I would more cautiously put it) that the general tone of Professor Ryle's book, as I have analysed it, combines with the use of these analogies to give the impression that the author accepts, in fact and in silence, a metaphysical psychology which he would overtly repudiate. The trouble, as Professor Ryle points out, is that our mental concepts are immensely complicated. Their empirical, operational explication is therefore bound to be very long drawn out and tedious. The temptation is all the greater to cut the whole long process short and come swiftly to roost in an analogy construed as a perception of the true nature of things. But the philosophical task in psychology as things now stand is to hold this natural precipitancy in check for a while longer, until the work which has been begun has been completed, and adequate empirical criteria of mental concepts lie to hand.

Mr. Wolff III, however, is overpowered by the very forces to which he attributes the downfall of Professor Ryle. He is apparently unable to see how there can be uniformities of human behaviour, and uniformities of uniformities, which are not hypostatised into necessary

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connexions or metaphysical continua. It is as if one could not see how, in physics, one can use a concept like elasticity or gravitation without claiming to perceive a thing (occult quality or necessary connexion) to which these words are taken to refer. Hence, at one moment, Mr. Wolff I is allowed to say: we must not hypostatise mental concepts, and therefore no explanation of human behaviour is possible at all; while at the next moment, Mr. Wolff II butts in with: but explanation there must be, hence, necessary connexions can be perceived, and hypostatisation (*scientia intuitiva*) is quite respectable. But when one reflects on the parallel cases from physics, one realises how these dichotomies were overcome centuries ago in the hard practice of science. '*Hypotheses non fingo*', said Newton, and meant it, and held to it; and if empirical philosophers have found it harder to state than the scientist to practise the principle on which the dichotomy has been resolved, that is no excuse for acting as if the dichotomy were with us, and for abetting its further life in psychology.

Isn't it high time, indeed, that we began to help the revolution in psychology as Mersenne, Locke and company helped the revolution in physics? Stopped raising metaphysical dust all around our mental concepts, whether openly, or from behind the screen of the logic of ordinary language? And perhaps, if we deprived ourselves of the pleasing but vain distractions of armchair psychology, we might come by some clearer notions of our proper business.

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THE LOGICAL POWERFULNESS OF PHILOSOPHICAL ARGUMENTS

In "Proofs in Philosophy",[1] Professor Ryle points out that "Philosophical arguments can be or fail to be logically powerful in a sense of 'logically' closely related to the sense in which a proof may be or fail to be logically rigorous".[2] But he shows that philosophical arguments are not proofs. For proofs require theorems and premises. But "there are no philosophical theorems".[3] And when the philosopher attempts to argue from explicit premises, "the debate instantly moves back a step. The philosophical point at issue is seen to be lodged . . . in those pretended premises themselves".[4] What, then, is the sense in which philosophical arguments may be logically powerful? Professor Ryle does not attempt to provide a direct answer in this article.

The answer to be suggested in the present discussion arises from the examination of several examples of logically powerful philosophical arguments, including one used by Professor Ryle. The first is Berkeley's argument to the effect that it is hopeless to appeal to external bodies in the attempt to explain how our sensations are produced. "For, though we give the materialists their external bodies, they by their own confession are never the nearer to knowing how our ideas are produced; since they own themselves unable to comprehend in what manner body can act upon spirit."[5] This looks like a proof, but in fact illustrates the difference between a proof and a philosophical argument. If it were a proof, its premise would be "It is inexplicable how body acts upon spirit". In this case, the phenomenon noted by Professor Ryle would occur: Berkeley's antagonist would instantly begin to raise questions about the pretended premise. The total inexplicability of a situation is, after all, not easy to establish; perhaps the explanation has merely eluded Berkeley. In point of fact, however, the debate does not make this step backwards. For it is the "materialists" themselves who have pronounced the situation inexplicable. Berkeley's conclusion is a logical consequence of this pronouncement. But the argument would be pointless if addressed to anyone not making the pronouncement; it would revert to a pseudo-proof. This suggests that at least some logically powerful philosophical arguments exhibit the logical consequences of a proposition not generally maintained but peculiar to a position, or group of positions, to which they are addressed.

It has often been argued that Kant, in deriving certain duties from his Categorical Imperative, makes an implicit appeal to

[1] *Revue Internationale de Philosophie*, 1954, pp. 150-157.
[2] *Ibid.* p. 151. [3] *Ibid.* p. 152. [4] *Ibid.* p. 152. [5] *Principles*, Sec. 19.

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consequences. Whether Kant actually does this is, of course, beyond the scope of the present discussion; let us suppose that he does and consider only the logical powerfulness of the argument. Since it is often the utilitarians who attack Kant in this fashion, it is clear that the argument does not presuppose any general rejection of the appeal to consequences. All that it presupposes is Kant's rejection of this appeal. The proposition whose logical consequences are exhibited is thus again philosophically local.

Two elements occurring in each of these examples appear to be characteristic of logically powerful discourse in general. One of these is, naturally, logical structure: both rigorous proofs and logically powerful philosophical arguments exhibit the logical consequences of certain propositions; they do not merely state conclusions. The other is the assent of at least one person to the propositions whose logical consequences are exhibited. Proof in general presupposes the explicit or implicit assent to such propositions of all qualified persons, whether this assent is given tentatively or with finality. The logically powerful philosophical argument, on the other hand, would seem to presuppose the assent to such propositions of necessarily fewer than all qualified persons. For if it presupposed the assent of all, it would no longer be powerful; inevitably, some person would begin to raise questions about the propositions to which all were supposed to assent. Such an argument would be a pseudo-proof.

If a certain proposition is unquestionably true, then all properly qualified persons will assent to it. Not all qualified persons, however, would assent to the propositions whose logical consequences are exhibited by a logically powerful philosophical argument. Does this mean that the truth of such propositions is questionable? If so, it is difficult to see how the argument could be genuinely powerful. This impasse can be surmounted only by pointing out that the propositions we are considering are neither unquestionably true nor questionably true: either they are not true (or false) at all, or else they are "true" in a sense other than that in which propositions capable of eliciting general assent are true.[1] If the latter consist of tautologies and true empirical propositions, then the propositions in question can belong to neither class. This is to say no more than what is often said of philosophical assertions.

I turn now to one of Professor Ryle's examples. Aristotle was able to demolish Plato's theory that pleasure is replenishment by pointing out that while replenishment can be fractional, pleasure cannot be.[2] This argument presents difficulties, since it may not be obvious that these propositions are peculiar to Plato's own position

[1] A suggestion here is that instead of being "true of" any situation, such propositions are "true to" a philosophical position. Thus Kant's critics are saying in effect, "It would be true to your own position to avoid the appeal to consequences".

[2] *Proofs in Philosophy*, pp. 154-155.

or to a limited number of positions including Plato's. Would they not, indeed, be assented to by all qualified persons? If so, they have no plausible contraries. But surely they must have such contraries. Utilitarianism, for instance, comes at least very close to asserting that pleasures can be fractional. If Plato was in this sense a utilitarian, Aristotle's argument missed the point. Thus if Aristotle's argument did not miss the point—if, in other words, it was logically powerful—this could only have been due to Plato's implicit endorsement of a philosophically local proposition.

To say, as a great many contemporary philosophers would, that Aristotle's victory here is simply the result of his having perceived the grammar of "pleasure" and of "replenishment"[1] certainly illuminates the issue but does not imply, as it might seem to, that the grammatical situation reported by Aristotle is other than philosophically local. If all qualified persons must assent to Aristotle's report, then we shall have to say that those who disagree with it are unqualified. Do we really mean to assert, though, that utilitarians are unqualified with respect to the grammar of "pleasure"? It is true that they take liberties with this grammar. But are these like the liberties that a person inept at English takes with English grammar? Such a person is surely unqualified: he is unaware of the rules. The utilitarian, however, does not speak as he does simply out of ignorance of the rules. In a sense, he is proposing new rules, for which he supposes there to be some justification. That most contemporary philosophers regard the utilitarian as qualified is indicated by the fact that they argue with him. One does not argue, however, with an unqualified person; one merely instructs him. Thus Aristotle's position, having an at least debatable contrary, is philosophically local.

If it is only philosophically local propositions to which a philosopher's assent is presupposed by logically powerful philosophical arguments, this explains what has often been noticed about such arguments; to wit, that they are usually negative in the sense of attacking particular positions.[2] An affirmative or constructive argument would fail if it merely exhibited the logical consequences of what a particular philosopher had assented to; for it would not convince those taking other positions. In the effort to be generally convincing, philosophers attempting to propound constructive arguments have sought propositions to which they hope all qualified persons will assent. But the hope has usually turned out to be illusory. For such constructive arguments are almost inevitably pseudo-proofs, and issue in wrangles about the putative premises.

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[1] See Professor Ryle's account of this argument in the passage just cited.

[2] This point is brought out with great clarity by Professor Ryle in *Philosophical Arguments* (Oxford, 1945), especially pp. 5-6.

ON KATTSOFF'S REFLEXIONS ON JØRGENSEN'S REFLEXIONS ON REFLEXIVITY

To Professor Kattsoff's interesting reflexions (in MIND, No. 253, January 1955) on my reflexions on reflexivity (in MIND, No. 247, July 1953) I would answer as follows:

I quite agree with Professor Kattsoff that my reflexions have maybe far-reaching consequences as to several logical and mathematical theories and conceptions in their present forms, *e.g.* as to certain definitions of cardinal number. Indeed, I have myself formed a theory of cardinal number different from the usual ones, but as yet it has merely been published in a sketchy form and in the Danish language (in "Eros and Eris. Kulturessäer tillägnade Rolf Lagerborg", Helsingsfors, 1944). Whether this theory is satisfactory or not I do not know for certain. But in the present connexion this seems to me to be of secondary importance. What I would stress is the following point in which I regret that I cannot be at one with Professor Kattsoff.

He seems to argue as follows. If reflexivity is rejected we may get rid of the paradoxes, but then we shall also have to reject or restrict a number of theories that are considered important. We therefore have to choose between the two possibilities: either we keep reflexivity and with it the theories (and some paradoxes), or we reject reflexivity (and the paradoxes) but must then also reject the theories. Which choice is most inconvenient? Professor Kattsoff prefers the first-mentioned possibility.

To me it is not at all a question of choice and expediency. If "reflexivity", as I think, is an empty word (or an untenable concept if you like), we have to reject it irrespective of the consequences of such rejection. We then also have to alter or modify the theories in question. To keep to a dear theory that is founded on an untenable concept is to my mind unallowable in science. Perhaps it may be useful in politics or moral—though I even doubt that, if a long view is taken.

This will do, I think, to clear up my position.

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A NOTE ON THE LIAR-PARADOX

MR. ENCARNACION has argued, in the January 1955 issue of Mind, that my version of the liar-paradox depends upon a symbolic fallacy. To demonstrate his error, *i.e.*, to show that symbolism is not essential to my version, let me restate my argument in plain English as follows:

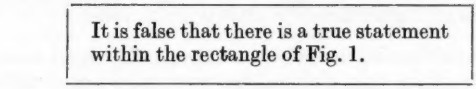

FIG. 1.

According to Russell's treatment, the sentence within the rectangle of Fig. 1 is meaningless, and may be called a pseudo-statement, because it is a version of the liar-paradox. But Russell's treatment is unsatisfactory because it resolves the original paradox at the price of a new one. For, if the sentence of Fig. 1 is meaningless, we must admit, since we observe that there are no other sentences within the rectangle, that it is false that there is a genuine or meaningful statement within the rectangle of Fig. 1. And, if there is no statement within the rectangle of Fig. 1, then *it is false that there is a true statement within the rectangle of Fig.* 1. The italicised part of the preceding sentence will be recognized as identical with (even if a different token of) the sentence within the rectangle of Fig. 1. And since the italicised sentence is true, and therefore a meaningful statement, the sentence within the rectangle is not a pseudo-statement either. Thus if the sentence in question is meaningless, then it is meaningful and *vice versa*.

It is a different question whether I have symbolised the above argument correctly. Mr. Encarnacion tells us that I have not, but I am not convinced. Let me mention one of my doubts. In the last but one paragraph of his paper Mr. Encarnacion says that the significance of the same symbol changes with the change of context: he says that 'p' as a conjunct is used as a variable for propositions whereas as an argument to 'f' it is used as a variable for names of propositions. Why cannot I follow suit, and say that 'a' is an abbreviation of the sentence of Fig. 1 when 'a' stands alone but is a name of such an abbreviation when it is taken to be an argument to 'f'? And if I can say that, then I am no longer committed, as my critic contends, to the insignificant expression "It is false that there is a true statement within the rectangle of Fig. 1 is within the rectangle of Fig. 1," but entitled to write instead: 'It is false that there is a true statement within the rectangle of Fig. 1' is within the rectangle of Fig. 1. However, Mr. Encarnacion's paragraph is obscure, and it is possible that he only meant to say that my interpretation of 'p' differs with the change of context without intending to assert contextual change of significance as a requirement of symbolic notation.

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HIGHER LEVEL DESCRIPTIVE PREDICATES

A discussion of Prof. Weinberg's "Concerning Undefined Descriptive Predicates of Higher Level". MIND, July, 1954.

IT is Weinberg's main contention that though first level descriptive predicates stand in some designative relation to something extra-discursive, this is not so for the higher level descriptive predicates. Not only is this his claim but he promises us that after giving some presumptive evidence for this claim he will go on to give us some conclusive arguments for the contention.

He begins by making some comments on first level descriptive predicates, pointing out that "the smallest unit of significant discourse is a complete sentence, and, in order to form a complete sentence we must employ names of things (or variables) and predicates". Taking "a" as the name of this which I have before me and the proper predicate, which in this case is "red", I assert, "This is red" or "red(a)". It is an exercise each of us must do for himself, since "a" functions as a purely indexical symbol. In either case, *i.e.* whether we wish to write, "This is red" or "red(a)", we make the significant sentence by juxtaposing the terms according to a simple convention of English. The name "a" above is not, taken alone, an independent unit of discourse. The first level descriptive predicate "red" taken alone is not a significant unit of discourse. Only together, or, to use Weinberg's term, only in a *context* is each significant. In the assertion, "red" classifies what "a" indicates. ". . . between such symbols and the extra-discursive world there is some direct relation." Weinberg then asks whether this is so for the higher level predicates. He offers us the definitions of "1F" and asks, allowing "1F" to be a mere abbreviation for the definiens,

$$(i.e.\ \text{“}(\exists y)\, fx \cdot - (\exists y)(y \neq x \cdot fy)\text{”}),$$

whether "1F" has a designative relation to something extra-discursive. Since the definiens is a kind of formula composed of logical constants which function in a non-designative way, Weinberg concludes that the higher level predicate "1F" cannot be said to have a designative relation. One curious thing is that Weinberg offers us this argument at this point though the question whether higher level *descriptive* predicates have a designation-relation to something extra discursive is of special interest to philosophers *who do not for a moment assert that logical constants function in anything but a non-designative way.* The second thing I find curious here is that the higher level predicate which Weinberg chooses to define is a logical predicate. And a most excellent way of characterising a logical predicate is to say that it is a predicate which may be defined in terms of logical constants (and predicate variables) and nothing else. So, it does not seem that we have said anything to shout from

the housetops when a philosopher, taking as an example of a higher level predicate one which is a logical predicate, points out that this logical predicate does not have a designative relation. It does not even seem to be presumptive evidence for the claim that higher level *descriptive* predicates do not have a designative relation.

But let us proceed with the paper, for my eye speeds ahead. Weinberg now turns to " colour ", a candidate for an example of a higher level descriptive predicate. The complete example is, " Red is a colour ", and we are told that he (Weinberg) will show or attempt to show (1) that " red " cannot occur as an argument for such a function, and, (2) that " colour " can be defined. With success on these two points we can accept " colour (red) " to be an acceptable expression. Following this we read, " The only way in which ' red ' occurs in such contexts as ' This is red ', ' Something is red ', etc., precludes the possibility that ' red ' can occur in isolation from such contexts. In such an expression, the fact that ' red ' can function only in such contexts as we have mentioned has been implicitly rejected." Here we see that Weinberg severely limits the meaning of " context ". We were told that a term " a " designates in a certain way and that " red " designates in a slightly different way when both the terms are part of the unit, " This is red " or " red(a) ". He seemed to propose that as *used* and as *understood* the parts " a " and " red " do form a context. Now, however, it becomes clear that context was distinguished linguistically in a schema and that this schema was the context. There is no real objection to this limitation, but let us go on. According to Weinberg, we note how " red " functions in " This is red ". " This " functions in a context in a certain way. " red " functions in a context in a certain way, different from that of " this ". Together they form a context but there is no good reason, allowing that " red " and " this " can only function in a context, that they cannot function differently in a different context from the context exemplified by " This is red ". In short, perhaps " red " cannot function symbolically save in some context, but from reading " This is red " we cannot simply assert that the example precludes " red " having a different function in another context. This possibility remaining, the arguments which follow, though interesting and acute, could never be conclusive.

Now I should like to offer a small suggestion on designation relations. We do begin by considering sentences as " This is red ", " This is round ", etc. Then we note that in each sentence " this " functions in an indexical or 'pointing' way. This is not to say that " this " when used in " This is red " necessarily (or even usually) designates what is designated by " this " in " This is round " but we say that it designates in the same way. Again, we turn to " red " as it functions in " This is red " and we say that it designates in the way " round " designates in " This is round ". This is not to say that what is designated by " red " is what is designated by " round ". And we shall not go into the question of *what* it is that

" red " designates or *what* it is that " round " designates, for I am as wary of becoming involved in the problem of universals here as Weinberg was in his paper. However, we reiterate that " red " and " round " designate in the same way. Let us call the way " this " designates in " This is round " the Y-designative way and let us call the way " red " designates in " This is red " the W-designative way. Talking this way would seem to be allowed us by the author when we re-read, Yet it makes sense to say that " red " classifies what " this " indicates in " This is red ". That is to say, between such symbols and the extra-discursive world, which symbols are used to describe, there is some direct relation. We pass from this point in our examination to note such others as " Red is a colour". Here a difficulty seems to arise, for a term which designates in a W way is now used to designate in a Y way. One solution might be that such terms as " red " be allowed to designate in a Y or W way. Any descriptive predicate of yet higher level would be allowed these designative ways while any term such as "this " would only be said to designate in a Y-way. All this is merely by way of a suggestion. But though only a suggestion, I do not find any material in Weinberg's paper which might serve as a good reason for not making the suggestion. In fact, I find there is some room for just such a view. In the Weinberg paper we are told that though a predicate such as " preceding " (*cf.* Russell's *On Order in Time*), accepted as primitive, designates in a direct and unambiguous way, this need not be the case for terms defined by means of " preceding " and the logical machinery of PM. Now, if predicates all of a given level do not designate in the same way, *surely* we can allow that predicates of different levels can designate in different ways.

Having dispensed with this part of the discussion, we now turn to the second point Weinberg proposes or promises to show, namely, that " colour " can be defined. When we come to this part of the paper we find merely an assertion that " colour " can be defined. One would believe that Weinberg would either prove that " colour " can be defined or offer us the explicit definition. Neither is offered us. We are told that, " as we have seen, there is no difficulty in defining descriptive predicates of a higher level." The truth is that we have not seen this at all, at least not in Weinberg's paper. Perhaps he has such a definition. If this is so, I merely ask that it be produced.

I have said as much as is seemly in what is only a discussion note but there is another matter I should like to comment on. There are two well known methods used by linguistic philosophers to-day. All other differences apart, their difference of importance is one of technique. There is the technique well articulated by Bergmann. One accepts a formalism ; the undisputed parts of PM is the formalism usually accepted. Then one gives an interpretation using English or any other natural language such as German, French, etc. Then one discourses about the interpretation and, it is expected,

resolves the philosophical puzzle. The technique of the other group —the best known spokesman of which is Ryle—is to make a careful study of usage in one's own language, *e.g.* English, in order to determine the unacceptable extension of usage which, it is asserted, leads to philosophical puzzles. I am not going to comment on the merits of either technique but since Weinberg is predisposed to use the Bergmann technique I wish to point out one grave misuse of the technique which I find in his paper. Allowing one attempts to make an interpretation of the formalism covering the area of the philosophical puzzle, we have no special right to do violence to what is an often understood and used statement of English. Violation of this prohibition is found especially in the passage where Weinberg, using the example "This is red", accepts a certain symbolic function for "red" (and we can easily come to accept this after accepting the form of the most simple assertion in PM) and then refuses to allow "red" any alternative function, in spite of the fact that we do make such statements as "Red is a colour". And the formalism of PM does not tell us that the sentence from English, "This is red" has any special priority as a vantage point.

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THE ORIGINAL TITLE OF *SIRIS*

(An abstract of "The Original Title and the First Edition of *Siris*", by A. A. Luce, in *Hermathena*, November 1954, by permission of the Editor.)

THE original title was *Siris : A Chain of Philosophical Reflexions and Enquiries concerning the Virtues of Tar Water, And divers other subjects connected together and arising one from another.* The first edition ('by G.L.B.O.C.') appeared in Dublin on 20th March, 1744; price, 3/6.

This statement corrects statements by A. C. Fraser, G. Sampson, and T. E. Jessop (in his Bibliography, 1934; in his edition of the Works, vol. V, 1953, he leaves it an open question).

There were two competing titles: (*a*) *A Chain of Philosophical Reflexions* . . . The only known extant copy is in the British Museum classing 1171 h. 22(2). Apparently when a few copies of this edition had been issued, Berkeley decided on a further simplification of the title, and a new title page was substituted in the rest of the issue, *viz.* that of (*b*). (*b*) *Philosophical Reflexions* . . . this is the title of the cheap (2/-) London edition, which came out three weeks or so after the Dublin edition. In the Bodleian and the Dublin copies its title-page is a cancel; in the Cambridge copy it is impossible to tell now whether its title page is, or is not, a cancel. The author's name is given.

The priority of the Dublin edition (and the Dublin title) is suggested by Berkeley's personal situation and preferences, by its anonymity, by its list of *Corrigenda et Addenda*, and by its price and style, and is proved by the evidence of the monthly magazines. The proof is complex, and consists in combining the evidence of the March and April numbers of *The Gentleman's Magazine*, *The London Magazine* (London), and *The London Magazine* (Dublin).

A. A. LUCE.

VIII.—CRITICAL NOTICE

Feeling and Form. A Theory of Art developed from Philosophy in a New Key. By SUSANNE K. LANGER. English edition, London: Routledge and Kegan Paul Ltd., 1953. Pp. xvi + 431. £1 8s.

As the title indicates, this book is a sequel to the author's *Philosophy in a new Key* (1941). In that work Mrs. Langer expounds a general symbolic theory which she applies to art in two chapters, one on its general import and one on significance in music. The present work expands this thesis into a general theory of art. Her object is to determine the "essence" of Art ("art is essentially one", p. 103) and to construct a system of concepts which shall provide an intellectual framework for a philosophy of art (viii). By this she hopes, I think, to put aesthetics on a level with those other "great edifices of thought, mathematics, logic, the sciences, theology, law, history, which grow from perennial roots to further and further reaches of their own implications" (p. 4). Mrs. Langer has tried to plant the roots.

For Mrs. Langer, the central concept of aesthetics is that which the artist creates, the work of art. In her earlier book she had discussed "significance" in music. In the present one she affirms this characteristic of all art. "'Significant Form' (which really has significance)", she says, "is the essence of every art; it is what we mean by calling anything 'artistic'" (p. 24). Thus every work of art is a symbol; it means or expresses something beyond itself. "A work of art . . . is 'a glass and a transparency'—not in any relevant way a *thing* at all, but a symbol" (p. 58). Mrs. Langer's symbolic theory, too, is expounded in her earlier book, and is summarized on pages 29-31 of the present work. It is the "logical picture" theory of Russell's early work and Wittgenstein's *Tractatus*, with influences from Whitehead and E. Cassirer. She distinguishes *symbolisms*, *i.e.* natural languages and the formulae of mathematics and logic, from other symbols. Symbolisms are composed of arbitrary signs conventionally associated with objects, combined by rules into complex symbols (sentences or formulae) which express propositions and share the logical form of the facts they represent. Symbolisms are used in ordinary and technical discourse to inform about matter of fact and abstract relationships. In religion, myth and art, however, there are other complex or "articulate" symbols. Indeed, all works of art are such symbols. Unlike languages or discursive symbolisms, they have no vocabularies or, presumably, general rules for combining these. They cannot, therefore, be used to convey what is general or abstract. Yet they have "structure" or "form", *i.e.* are arrangements of some sort of elements. As such they signify by presenting directly a similar

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structure of human feeling. Works of art are " presentational " not " conceptual " symbols. They convey their meanings in a way impossible to rational discourse. Thus, Mrs. Langer reaches her definition of ' Art ' (p. 40), " Art is the creation of forms symbolic of human feelings ".

But in being a symbol, " a glass and a transparency ", a work of art is also an illusion. An artist uses lines and colours on a physical surface ; sounds ; words ; and other physical media, to create an " image " or " illusion " devoid of reality. Or, perhaps, having a reality of its own, since I do not think Mrs. Langer wants to identify works of art with anyone's mental states. Nor must artistic illusion be confused with delusion. An artist is not deceiving himself or others. She also uses " semblance " or " virtual object " for a work of art. She classifies the arts into plastic (painting, sculpture and architecture), music, dance and poetry (which includes all the literary forms). Every work of each art is a particular symbol or " illusion " typical of the art. To this every aspect of the medium must contribute. The result symbolizes the form of a particular feeling. Thus every work of the plastic arts is a special form of " virtual space ". A painter creates on a flat surface by lines and colours an illusion of depth, of three dimensional space. This composition " in depth " is the essence of a picture. Sculptors create " virtual kinetic volume ", the semblance of living form, though it need not " represent " an actual organism. Utility and function are not the essentials of architecture, whose essence is the creation of an " ethnic domain ", a virtual centre of human activities which coincides with a geographical place and building. Superficially, the notation of music would seem to be a symbolism as conventional as language. Mrs. Langer denies this. Music is not discursive. A musician creates, through sound, an " image " of " real ", lived time ; Bergsonian subjective time or duration. This is opposed to " clock " time ; the conceptual measurement and misrepresentation of time. Music makes time audible (p. 110). It does that which is impossible to conceptual thought, presents real, lived time through the virtual time of " the sonorous image of passage " in musical forms (p. 113). Musical works are presentational, not conceptual, symbols. A dancer is his (or her) own medium. By physical movements he creates a pattern of virtual or mock gestures which are the essence of dance. Real gestures are made by someone moved by anger, fear, love or some other passion. These are real " powers ". The virtual gestures of the dance similarly emanate from virtual powers which govern the movements of the dancers. A dance is " a play of powers made visible " (p. 187). When Petroushka gesticulates in despair, a dancer moves and gestures. The dancer is not in despair ; his gestures are not caused by his own feeling. He is moved by the imagined situation of Petroushka to dance this semblance of despair and so create a work of art (p. 177). Finally, in the literary arts, words are used to create an " illusion of life ", virtual histories. The

literary artist uses the language of discourse but does not state what is true or false. Mrs. Langer distinguishes sharply between the discursive and expressive use of language. She recognizes three main types of literature, poetry, drama (tragedy and comedy) and the novel. Each of these types consists of an example of the typical variety of the basic illusion of life appropriate to the literary form. These are discussed in chapters 15-19.

Incidental to her system, Mrs. Langer says much that is interesting and illuminating about the arts. Moreover, her theory is original, vigorously argued and well illustrated. The book is also very competently written. Yet one is uncomfortable. There is too much of the logical drill sergeant about this formidable array of definitions and concepts. Are the arts really as tidy as this, we murmur, or have the stragglers just been ruthlessly cut off? Mrs. Langer has, *e.g.* defined a pictorial work of art as a composition to suggest three dimensional spatial forms. But this is either false or very arbitrary. Form, in this sense, is an important element in some paintings but not in all. It is not, *e.g.* in the last and greatest works of Turner. As Sir John Rothenstein has said, in these, for Turner, "light was the one visual reality" and "his sole concern became the creation of works in which colour infinitely transcended form".[1] Is Mrs. Langer prepared to say that Turner was not an artist and that *Rain, Steam and Speed* and the glittering *Falls of Clyde* are not works of art? If so, we may decide that, like Roger Fry, Mrs. Langer is too attached to her theory to be able to appreciate Turner, and reject her definition. Or, accepting the definition, we must find another term to describe Turner's pictures. This piece of verbal legislation may or may not be convenient; it is certainly not compulsory in order to understand painting. There are, of course, many other elements besides those of form, light, and colour, predominantly important in some pictures. Mrs. Langer claims an empirical or "studio" point of view (p. ix). It would seem more in accordance with this to admit that "work of art" even in respect of pictures is used with a wide range of meanings for a great variety of works. Not all painters are doing that which was done by Giotto and Cezanne as Mrs. Langer, apparently following Bell, Fry and Berenson, suggests. I have the same quarrel with all Mrs. Langer's definitions. No doubt they all emphasize a characteristic common to some, perhaps even to all, works to which the definiens applies but the forcing of this into the role of sole, essential characteristic of all such works is quite arbitrary and, ultimately, pointless, except to satisfy the aesthetic preference of a logician for conceptual order. There are also other difficulties connected with particular definitions of which I will mention one. I have tried hard to follow Mrs. Langer's account of music but still find it baffling. Of course, one thinks, music consists of a series of sounds which take time to occur. So far Mrs. Langer

[1] Introduction to Catalogue of an Exhibition of Turner's paintings, Whitechapel Art Gallery, 1953.

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must be right that time is essential to music (even though it is far from being all that is essential to all music). But why virtual or "illusory" time? Mrs. Langer seems to admit (p. 120) that a musical work exists in the full sense only when performed. Only then, surely, is time involved but then it is ordinarily real, clock time. The concert took three hours of which the symphony occupied one. Naturally, if the performance is good the listener does not have an eye on the clock as well as an ear on the music. He is absorbed by sounds, but he can find out afterwards how long the performance lasted. No illusion of Bergsonian "duration" need be invoked. But one might argue that a musical work is not identical with any of its performances. The time taken by these may vary according to the interpretation of a score by conductor and performers. The "real" time is that intended by the composer and, perhaps, indicated on the score. But the composer's intentions or his verbal indications of tempo and rhythm, etc., are not musical occurrences. What a composer intends or recommends to performers are not descriptions of some "real" temporal passage independent of performance. Nor are they "virtual" or "illusory" times since they are not temporal. If a musical work is a "logical construction" out of its performances then it has no one time but a range of resembling times which are measured by clocks. If such a work is an object independent of performances then, I suggest, neither Mrs. Langer nor anyone else has given a clear account of its temporal existence. This puzzle brings out the general difficulty introduced by the use of the words "illusion", "virtual", "semblance" which confuse the aesthetic issue. A dancer, *e.g.* does not "virtually" gesture when he moves; he *does* gesture. For as Petroushka he is in despair. That he is not as Nijinsky or Somes is quite irrelevant. For the dancer himself is not pretending to despair; he *is* dancing Petroushka.

Mrs. Langer says disappointingly little in detail about either "form" or "feeling". Nor does she analyse the relation of "expression" between them. One simple question worries me. What, on this view, is the criterion of one symbol and its corresponding feeling? A lyric, a song, a drawing room size picture may be such single symbols. But what of a Chinese scroll painting or a large mural which cannot be taken in at a glance? What of the *Inferno* or *Paradise Lost* or a three movement symphony? Are these one or many symbols? Do they express one feeling or several feelings? How do we determine which they do and how it is done? I think Mrs. Langer would answer "by intuition". All cognition of form and of formal significance or import is "intuitive" (p. 378). Intuition is the basic mental act upon which all knowledge depends. Let us admit that explanation must begin and stop somewhere. But Mrs. Langer surely asks us to swallow too much and to stop too soon. There should be some answers to the questions I have asked and to many others. For example what feeling is related to the pattern of virtual time which is a Mozart symphony and how does this differ

from that conveyed by a Beethoven quartet? If the answer is, we know by intuition or that the feelings differ as the works differ, does this say more than that the works differ, which is indisputable? There must be more to say of the relation of feeling to art if the assertion of a connexion is not to be pointless or merely a personal fancy.

As Professor Morris Weitz has pointed out,[1] the "picture" theory of language adopted by Mrs. Langer has been devastatingly criticized by one of its originators, *viz.*, Wittgenstein and by many contemporary philosophers. But I question the assumption that every work of art is a symbol. Some may be, *e.g.* a primitive statue may be both a work of art and a symbol of fertility; others may contain symbols as do Christian and Surréalist pictures and all literary artists use the symbols of language. Mrs. Langer, however, has to stretch the ordinary use of the words "symbol" and "image" to breaking point to include pottery, textiles, carpets and buildings as symbolic forms. One serious drawback to this view is that which makes Mrs. Langer call a work of art "a glass and a transparency". A glass is valuable only for what one can see through it and a symbol is valueless except as a sign of that which it symbolizes. But a work of art just is that which is valuable for its own sake. It is something we contemplate, not contemplate *through*. I think Mrs. Langer would admit the intrinsic value of art, but I do not see how this can be reconciled with a totally symbolic character.

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[1] "Symbolism and Art." A review of Mrs. Langer's book. *The Review of Metaphysics*, VII (1954), 466-481.

IX.—NEW BOOKS

Dilemmas, The Tarner Lectures, 1953. By GILBERT RYLE. Cambridge University Press, 1954. Pp. 129. 10s. 6d.

'THIS book', says the author, 'is a slightly modified version of the Tarner lectures which I delivered in Cambridge in the Lent Term of 1953.' The modifications are evidently very slight, and the additions can be few; we are here given the Tarner Lectures and not a book based on them.

The greater part of these lectures is devoted to the discussion of seven unconnected philosophical problems, some fairly trivial, others of great importance. Thus we find discussed in chapter II a simple version of fatalism, in chapter III Achilles and the Tortoise, in chapter IV pleasure, in chapters V to VII various aspects of the problem of the relation between the world of science and the everyday world, and in chapter VIII the relation between philosophy and formal logic. All these subjects are discussed with the characteristic ease, brilliance and wealth of metaphor which one expects from Ryle; but, as he is clearly aware, the treatment of the more important problems is too brief and, deriving from the lecture-hall, too loosely-knit to constitute the main interest. Though Ryle makes many points of great interest on these various subjects, a discussion of them *seriatim* would neglect the main argument of the book.

Ryle does not offer these discussions, unconnected in topic, as a set of independent contributions to the various topics. They are meant to be illustrative of a thesis about the nature of philosophical problems, and Ryle is rightly more concerned in his treatment of each problem to show that it is a problem of a certain kind than to champion a solution to it. Therefore in this review attention will be concentrated on stating and discussing Ryle's view of the nature of philosophical problems in general as illustrated by the particular problems which he here discusses.

Ryle's general view about the nature of these problems, mainly expounded in Chapter I, is as follows: sometimes one finds oneself in a dilemma between two or more apparently irreconcilable theories or positions such that (1) these positions are not competing answers to a single question in a single domain of inquiry, so that to the extent that one of them is true the others are false and evidence for one is directly evidence against the others, but rather (2) these theories naturally belong to different domains of inquiry; (3) 'we often find one and the same thinker—very likely oneself—strongly inclined to champion both sides and yet, at the very same time, strongly inclined to repudiate one of them just because he is so strongly inclined to support the other' (page 1); (4) 'each of the seemingly irreconcilable positions may have all the support anyone could want for it' so that the problem cannot be settled by looking for further evidence for and against each competing position in isolation; (5) the competing positions may be derived from science or from common sense; they certainly need not be philosophical in character or based on philosophical theories.

Given such a dilemma the conflict, Ryle claims, is only apparent; the theories or positions are at cross-purposes rather than in logical opposition, and the resolution of such dilemmas is the task of philosophy. Thus, to take an example Ryle touches on but does not elaborate, in the problem of free-will we are faced with such dilemmas as that between the view that

our characters are causally conditioned by environment and heredity—which both psychology and the ordinary training of children presuppose—and the view that we are responsible for that alone which it is in our power to refrain from doing—which is a natural ethical opinion. These are not philosophical views, and each in its own sphere seems obviously unobjectionable; yet they seem to be incompatible with each other. Resolution of this conflict, Ryle holds, must proceed not by an attempt to adjudicate between these views but by examining the relation between two systems of concepts—those clustering around the notion of *training* and those clustering around the notion of *responsibility*, for example. Therefore (pp. 31-33) Ryle insists that philosophical analysis is never of a single concept but always of 'conceptual traffic blocks'. To try to analyse the concept of *cause* in isolation would be as absurd as 'to try to teach a boy how to use the concept of *cross-ruff* without yet having introduced him to the notions of *following suit*, *trump* and *partner*'.

It is clear that Ryle wishes to claim not merely that some philosophical problems are of this type but that at least all philosophical problems of the kind called 'analytical' are to be construed as being dilemmas of the type outlined above. Thus in the last paragraph of the book he says 'What is often, though not very helpfully, described as 'the analysis of concepts' is rather an operation—if you like a 'synoptic' operation—of working out the parities and the disparities of reasoning between arguments hinging on the concepts of one conceptual apparatus and arguments hinging on those of another. The need to undertake such operations first makes itself felt only when some dilemma shows its horns'.

If this is even a moderately accurate account of Ryle's view of the nature of philosophical argument, then this view is a version of what has (usually with dyslogistic intent) been called the therapeutic view of philosophy. For Ryle maintains that philosophical problems arise out of dilemmas where no real factual or logical conflict exists, but only 'fancied' conflict and 'cross-purposes' (p. 11), and the aim of philosophy is the removal of the puzzlement engendered by the dilemma, the freeing of the conceptual traffic-block. The novelty of Ryle's position comes in the diagnosis of that conceptual paralysis with which philosophy must deal as always arising from dilemmas of this special kind.

This claim of Ryle's seems to be over-comprehensive. The description he gives of a philosophical dilemma fits admirably at least some parts of the problem of free-will and the problem of Achilles and the Tortoise. Ryle can also make it appear at least plausible that the dilemma between our usual view of what we perceive and the physiologists' account of perception is of the same kind. Certainly then he has not invented a description of a non-existent type of philosophical problem. But it may be doubted whether Ryle has correctly diagnosed all even of the problems that he offers as illustrations, as will now be shown.

Ryle's last specimen of a dilemma is of the conflicting claims of formal and 'informal' logic. The dispute is introduced by Ryle as follows: 'gratuitously zealous Formal Logicians' are beginning to say to the philosopher that he should give up his trial-and-error methods and use formal logic as his tool. 'Where you grope, we calculate'. To this the 'offended and also jealous philosopher' answers that formal logic is of no use except for the 'proliferation of truistic formulae'. Ryle then says 'As might be anticipated, neither party is right', though neither party is wholly wrong (p. 114). Here surely Ryle himself, in his picturesque style, points out that we have as horns of the dilemma not too obviously true

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positions of science or common-sense both of which need to be retained intact by showing their consistency but rather two highly debatable and even extravagant attempts to answer the very tricky question of the scope and nature of formal logic; Ryle rightly says that both the claims are wrong. Even if we rephrase the dilemma in the more sober form: thesis: logical problems should be solved formally; antithesis: philosophical problems, though logical, should be solved informally, thus making the rival claims more plausible, it is still doubtful if this dilemma is of the right kind and whether it can be regarded as the root of the philosophy of logic. Have we here really to face a dilemma of the type described by Ryle, or is it only an off-shoot, trading on a pun on the word 'logical', of the difficult but interesting question of the relevance of formal logic to informal logic? Surely this question arises more from the wonder Aristotle describes than from a conceptual traffic-block. The positions between which Ryle mediates seem to be in part competing, and pugnacious, answers to this question.

It is also hard to see how the example to which chapter IV is devoted—that of pleasure—is fitted by Ryle's description of dilemmas. He warns us, indeed, that in this case we shall 'find ourselves being pulled in a number of directions at the same time', that the dilemma will not be simple. But within the field of these many stresses we find those pulling for and against the theory of psychological hedonism. Yet Ryle diagnoses the theory of psychological hedonism as being based on the mechanical model of a parallelogram of forces and consequently misconstruing pleasure as a feeling which is a force prompting us to action. Thus here the dilemma is a problem arising not out of a quasi-conflict between obvious truths but out of a conflict in which one of the opposing positions is a philosophical misinterpretation of the concept of *pleasure*. Ryle himself says that we recognise that the notions of *liking* and *disliking* 'have undergone some subtle and suspect transformation when presented as the basic force which explains all our choices and intentions'. But the transformation is a philosophical move of an analytic character which Ryle himself presents as motivated not by an attempt to solve a dilemma (for it is one of the horns of the dilemma which has to be solved) but by a misleading analogy with mechanics. We have here a common source of philosophical problems and investigations—paradoxes forced on us by inappropriate analogies where no dilemma has yet arisen. Dilemmas are not the source of all philosophical moves; rather we must admit that some are generated by philosophical moves made for quite different reasons.

Thus Ryle's illustrations do not all succeed in illustrating the thesis which he wishes to present. Surely the sources of philosophy are more varied than he allows. We do not always ask questions of the form 'How can I reconcile this with that?' Quite apart from those calm philosophical investigations of the professional which might be dismissed as training rides, we need, to adopt Ryle's metaphor, to examine the engines of the vehicles, to compare and contrast one type with another, and to test their performances, as well as policing the traffic blocks. Sometimes, indeed, one vehicle, very different from another, has a body too like it for our easy recognition; we then go, not into a traffic-block, but a long way up the wrong street.

This review has been mainly critical in tone. This is not to be construed as disparagement. A philosophical argument which does not arouse its reader to counter-argument must either be very trite, very stupid, or of a perfection not found in this world. The argument of this book is neither trite nor stupid; nor is it perfect.

J. O. URMSON.

The Doors of Perception. By ALDOUS HUXLEY. Chatto and Windus, 1954. Pp. 66. 6s.

THIS is an account of the author's experience under the influence of four-tenths of a gramme of mescalin; drawing various, not always compatible, metaphysical and social morals from this. As a clinical study Huxley's contribution to the literature of "anaesthetic revelation" (See William James, *Varieties of Religious Experience*, ch. xvi and xvii) suffers often from unnecessary imprecision. Is looking on at himself breakfasting (p. 47) just feeling detached; or seeing himself from a point of view outside his own body? On the other hand, the regular reference to various idiosyncratic painters is helpful; and an interesting example of building up new public 'vocabulary' to describe esoteric private experience. (We have tried to use this method systematically in similar investigations in Aberdeen.) In drawing morals Huxley has it both ways: he hoped "by taking the appropriate drug . . . to know from the inside, what the visionary . . . even the mystic were talking about" (p. 9); and yet "I am not so foolish as to equate what happens under the influence of mescalin *or any other drug prepared or in the future preparable*, with the realization of the end and ultimate purpose of human life: Enlightenment, the Beatific Vision" (p. 58: my italics; his capitals). But insofar as these prescribed objectives are simply experiences of Is-ness and Suchness and what not (pp. 13-14 and *passim*), this is a piece of gratuitous dogmatism; and Huxley himself has here added his mite to the accumulation of evidence which indicates that it is also false. But perhaps it is to be part of the meaning of "Beatific Vision" that the expression refers not merely to such and such experiences or even knowledge, but to these acquired by more exacting and orthodox routes?

This book may do some good: by encouraging the use of relatively innocuous drugs to extend the range of experience; and by publicising investigations of this and certain chemically similar substances which promise to be very important for psychiatry. But readers should be warned: that even mescalin should not be taken except after a physical and psychiatric examination and under medical supervision; and that some subjects, the present reviewer for one, have yet to be rewarded with a revelation of the ineffable.

ANTONY FLEW

A Source Book in Greek Science. By MORRIS R. COHEN and I. E. DRABKIN. New York: McGraw Hill, 1948. Pp. xxi + 579. 80s.

Readings in Philosophy of Science. Edited by PHILIP P. WIENER. New York: Scribner's, 1953. Pp. ix + 645. $6.00.

Newton's Philosophy of Nature: Selections from his Writings. Edited by H. S. THAYER. New York: Hafner. Pp. xvi + 207. $2.25 or 18s. 6d.

MAKE a note of these three books, which have recently arrived from America. All of them fill gaps in the literature of philosophical libraries and deserve a place there. Only libraries and specialists will, alas, be able to afford the first two, but anyone concerned with the philosophy of the seventeenth and eighteenth centuries should be able to afford the Newton selection—especially as a paper-bound version is advertised at only $1.15.

The *Source Book in Greek Science* is an outstanding achievement; American scholarship at its best. In it are collected translations of the

chief classical and Hellenistic texts on scientific subjects, arranged by topic: mathematics, astronomy, physics, chemistry, biology and medicine are included, but material of a purely technological or of a speculative kind is left out. (Some will regret that the axe falls on Plato's *Timaeus*, for the 'atomic theory' of the elements in terms of triangles has had an immense historical influence.) Where there is a standard translation—Loeb, Oxford Aristotle, T. L. Heath or the like—this is used: other texts are newly translated by Dr. Drabkin. There is a useful bibliography, and the introductory notes and arrangement are throughout intelligent: it is specially valuable, for instance, to have Aristotle's account of natural motion printed next door to key-passages from Simplicius' and Philoponus' commentaries. One surprising omission makes the book less manageable as a work of reference than it might be: one can rarely tell from the table of contents what passage one will find transplanted in the text. 'Algebra, problems from Diophantus' is explicit enough; but too often we are left to guess what author is in store for us from 'Geometry, an anticipation of Guldin's theorem' or 'Botany, Organography, Roots'—answers, Pappus and Theophrastus. But this is only a blemish, and one which Dr. Drabkin will surely remove from later editions. It is sad to recall that Professor Cohen died before the book appeared, and so never saw it become the standard work it is. This book will not easily be displaced.

Professor Wiener's anthology is less satisfactory, but is still useful. Many classical philosophers of science are represented: Duhem, Poincaré, Clifford, Mach, Meyerson. Passages of philosophical importance are included also from such scientists as Einstein and Planck, Darwin and Sherrington, Freud and Malinowski. But these extracts are not as full as they might be, and between them they make up only part of the book. The rest—a third to a half—is occupied by reprints which are either ephemeral or scarcely relevant: a puff for cybernetics and one for 'semiotic', an address by Professor Oppenheimer on Science and World Order, a paper by Carnap on abstract entities, and so on. (I do not name the worst.) Two things seem to be responsible for this dilution, the idea that the philosophical theories of the logical empiricists are specially 'scientific', and the feeling that such an anthology as this must include something on 'cultural aspects' of the sciences. Neither idea crosses the Atlantic very well, particularly with the £ at $2.80.

Newton's philosophical reflections are scattered throughout his letters, books and papers, and a collection of them has long been needed. Mr. Thayer's selection is well planned and admirably presented. Nothing of importance is omitted, though it is a matter for opinion whether a little more might not have gone in from the *Principia*. The Hafner Library of Classics, of which this is no. 16, is becoming a notable element in American philosophical publishing. One had not hoped ever again to see Rousseau's *Social Contract* and Hume's *Dialogues* issued in the U.S.A. at less than a dollar apiece, or two volumes of St. Augustine at less than two dollars the pair.

STEPHEN TOULMIN

Truth and Consequence in Mediaeval Logic. By ERNEST A. MOODY. North-Holland Publishing Co., Amsterdam, 1953. Pp. viii + 113.

A FRUITFUL study of mediaeval logic, as of other mediaeval disciplines, requires not only sound mediaeval scholarship but also a thorough knowledge of modern results in this field; this combination is as welcome

as it is rare. Dr. Moody's well-documented monograph enables modern logicians to estimate the achievements of mediaeval logic as taught in the Arts faculties of the universities, which I shall call 'Arts logic' for short. His presentation of mediaeval views is sympathetic and very clear; I think his sympathy sometimes leads him to find a clearer sense than is likely to have been in the authors' own minds, but at any rate the evidence is always fairly set before the reader.

I will take Chapter IV first, which is concerned with the Arts logicians' theory of *consequentiae*, a sort of propositional logic. What were these *consequentiae*? If we look at the Arts logicians' own explanations, we find that they treat 'if p then q' and 'p, therefore q' as meaning much the same, and *either* is an example of a *consequentia* (p. 66)! In view of this, any translation (such as Dr. Moody attempts) of mediaeval rules about *consequentiae* into modern symbolism is bound to be partly arbitrary. Take the rule 'whatever follows from the consequent of a *bona consequentia* follows from its antecedent'. Dr. Moody in effect represents this by the schema "If (if p, then q), then if (if q, then r), then (if p, then r)" (we need not here discuss the special form of his symbol for 'if . . . then . . .'); but it is arbitrary to choose this representation instead of (say): "If 'p', 'q', 'r', are so interpreted that 'p, therefore q' and 'q, therefore r' are valid inferences, then on the same interpretation 'p, therefore r' is a valid inference." For the alternative representations cannot even be stated without making the sharp distinction between 'p, therefore q' and 'if p, then q', which the Arts logicians lacked. So far from being an anticipation of modern rigour, the mediaeval theory marks a loss of ground gained by the Stoics; for they had sharply distinguished between inferences and hypothetical propositions, and again between proving propositions according to rules of inference and deriving rules of inference from rules of inference by means of so-called *themata*. The mediaeval confusions are indeed historically explicable; if Dr. Moody is right, the results of Stoic logic reached the mediaevals by way of Boethius; and Boethius' understanding of them was very defective.

The distinction between those *consequentiae* that hold good *simpliciter* and those that hold 'as of now' (*ut nunc*) is represented by Dr. Moody as anticipating the modern distinction between strict and material implication. But the texts he refers to give me rather the impression of a perplexed tangle, out of which one can pull various threads. (i) Let 'p, q, therefore r' represent a valid inference, whose premise 'p' is in fact true. It is then easy to understand somebody's saying: *Simpliciter*, 'r' follows from 'p and q'; but as things are (*ut nunc*), since 'p' is given as true, 'r' follows just from 'q'. (ii) The mediaevals were much exercised with Aristotle's remarkable doctrine (in the *De interpretatione*) that if things *now* are thus and so, then in some sense they are thus and so *necessarily* (because what has already come to pass cannot be altered?) Now somebody who confuses two possible senses of *ut nunc*—'as things are *at present*' and 'as things are *in the actual course of events*'—will be led on from this Aristotelian doctrine to the view that in *some* sense whatever happens to be true *about past, present, or future* is necessarily true; so that if 'not both (p and not q)' is in fact true, it is in *some* sense necessary, and 'q' thus follows *ut nunc* from 'p'. We see this confusion pretty plainly in the quotation from Buridan on pages 98–99; where we find Buridan hesitating whether to say that the *consequentia* 'If Antichrist is not going to be begotten, then Aristotle never was' (whose antecedent contradicts revelation) holds good 'as of now' or 'as of then' or 'as of now by way

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of then' (*ut nunc per tunc*)! (iii) There seem also to be confused reproductions of Stoic logic (p. 75).

As regards the analysis of simple categoricals, discussed in Chapters II and III, the Arts logicians laid down the main lines of traditional 'Aristotelian' logic—though some of their subtleties passed into oblivion. For them, a categorical consisted of two terms joined by a copula; and these two terms were names of objects; the truth of an affirmative categorical consisted in its terms naming the same thing. The copula was thus always a copula of identity; *e.g.* 'every man is an animal' was taken to assert that every man is identical with some animal or other. There were, however, two ways in which the name-relation between 'man' and men could be modified: (i) in regard to *suppositio*; (ii) by *ampliatio*. (i) While still *signifying* men in general, the term 'man' might *stand for* (*stare s. supponere pro*) the things it signified in various ways; *e.g.* in 'every man' 'man' stood for men conjunctively—'this man *and* that *and* the other'—whereas in 'some man' it stood for them disjunctively—'this man *or* that *or* the other'. For these varieties of *suppositio* there was a whole set of technical expressions; the traditional distinction of distributed and undistributed terms is a mere remnant of this complicated doctrine. (ii) It was held that the reference of 'man' varied according to the tense and mood of the copula. As subject of a factual 'is', 'man' would refer only to men now living; but with 'was' its reference extended to past, and with 'will be' to future, human beings; and with 'can be', or 'must be', or the 'is' of a definition or of a natural law, its reference extended to possible men as well—whatever that may have meant. (On this view, the proposition 'some man must be damned' would mean 'something that is either a man or a possible man must be damned'—which seems rather to draw its sting.) This extended reference of a name was called *ampliatio*. Oddly enough as regards the actual statement "Men are signified by 'man'", it seems to have been held that the reference of "men" extends over all times (p. 57); but then surely the whole doctrine of *ampliatio* collapses. The name-relation does not admit of being temporally qualified (if we exclude the question when a name *came into use*); 'Caesar' did not cease to refer to Caesar when Caesar died.

The part of Arts logic that has most contemporary interest is the theory of the predicate 'true', especially in regard to the *insolubilia* (variations of the Liar paradox). Can we *always* assert what we get by substituting a specific statement for '*p*' both times in "'*p*' is true if and only if *p*"? or should we correct this schema to: "'*p*' is true if and only if '*p*' *occurs* and *p*"? It was argued, in favour of this correction, that it is possible that no true statements (indeed, no statements at all) should occur, but not possible that the statement 'no true statements occur' should be true. But I cannot follow Dr. Moody's attempts to show how this correction resolves the *insolubilia*; his symbols (pp. 108–109) are not used in a very clear way; and anyhow the statements that give rise to paradox *do* occur, so the added condition "if '*p*' occurs" is irrelevant. I am sorry he did not tell us more about Ockham's doctrine that an expression in a statement cannot have *suppositio* for the (meaning of the) statement as a whole (cf. pp. 103–104).

There are several disfiguring, though not misleading, misprints (pp. 1, 5, 22, 40, 42, 44, 60, 63). The verbs *denotare* and *verificari* (*de*) are throughout rendered literally; this leads to awkward English (*e.g.* 'denote' with a 'that' clause); moreover, it obscures the actual meaning of *verificari de*: 'to *hold* true of' (not: 'to be *found* true of'). On page 33

we get the forms *secundo, tertio, adiacens*; there may be manuscript authority for these, but *secundum, tertium, adiacens* are at least the commoner forms. *Formale* is rendered 'formula' on page 31 and 'formal constituent' on page 43; the latter way is certainly better.

P. T. GEACH.

The Pragmatic Philosophy of C. S. Peirce. By MANLEY THOMPSON. University of Chicago Press, 1953. Pp. xvii + 318. 43s. 6d.

IT is not necessary to apologize for adding another volume to the increasing literature on Charles Peirce. It is a tribute to the multifariousness, if not to the simplicity, of Peirce to realize that he is not a philosopher who can be "discovered" once and for all and it is only sensible to welcome any patient and intelligent contribution to Peircian studies. Mr. Thompson's book is patient and intelligent. If it is not "the" book on Charles Peirce, it is at least partly because Peirce's genius and contribution to philosophy cannot be compressed into the boundaries of whatever structure we can indicate in his work.

Mr. Thompson's Peirce is not a brand new Peirce and there would be grounds for suspicion if he were. It is not even true to say, as the comment on the dust jacket does say, "In this book, for the first time, the claims Peirce made for his new philosophy are subjected to a searching examination which . . . allows him to speak for himself, without being subjected to conformity with some preconceived standard of positivism or naturalism". But it is a searching examination which does cast light upon Peirce even if some of the ground covered is not new. It is also not novel to look for especial guidance from the "statements that Peirce made about Peirce" (p. xii). Some of Peirce's statements about his work are illuminating, others indicate that a philosopher's judgment of his own work are not uniquely judicious but can be clues leading to basic confusions. Fortunately Mr. Thompson is aware of this and in practice does not make this his only tool of scholarship.

Since this book is not intended as an exposition of Peirce's entire mass of philosophical writings we had best judge it in terms of the modest rôle the author desires for it. Mr. Thompson's concern is for Peirce's "pragmatic philosophy" as it emerges from the context of his writings rather than with the general philosophical significance of the "pragmatic maxim". Another way of putting it would be to say that the theme of the book is "what Peirce did with his pragmatism and what Peirce's pragmatism did to Peirce". This leaves untouched some of Peirce's important pioneer work in philosophy and logic. Mr. Thompson would have succeeded better had he stressed even more than he does that Peirce did not so much clarify and analyse his leading metaphysical, epistemological and phenomenological notions *via* the pragmatic method as he tried to work out, somewhat fancifully and, I think, without singleness of aim, what sort of metaphysics, epistemology, and phenomenology would tend to justify the pragmatic method. In this it would have clearly been less misleading to follow Peirce's lead and title the book, "The Pragmatistic Philosophy of C. S. Peirce". Whatever one thinks of the plan and execution of Mr. Thompson's book it would be unfair not to call attention to the fact that he does accomplish his fair share of clear exposition and suggestive criticism along the way.

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Mr. Thompson does well to call attention to the fact that it was concern for problems generated from the analysis of traditional logic, that gave both the stimulus and the general direction of Peirce's investigation of not only deduction and induction but also of symbolism and the nature of inquiry. The opening chapter is a careful presentation of Peirce's initial gropings in logic. These initial studies of Peirce are not only interesting in themselves but undoubtedly, as Mr. Thompson indicates, they led Peirce, rightly or wrongly, to the formulation of the categories. Here, as elsewhere, it is right to stress the tremendous influence that Kant's writings exerted upon Peirce—and influence no less important at those points where Peirce sharply diverges from Kant. In following Mr. Thompson's presentation one is intrigued with the way any particular problem was tortuously attacked by Peirce from so many different sides and then related (no less tortuously) to others in so many different ways.

In part II we are led into Peirce's "Scientific Metaphysics" though it is not clear why the chapter bearing this heading deals primarily with the more exotic aspects of Peirce's metaphysical speculations, *i.e.* his doctrine of agapistic evolution and his ruminations on God. The lack of solid fare in this chapter reflects perhaps a similar wateryness in Peirce when he deals with these matters. In light of Mr. Thompson's remark that "Scientific metaphysics . . . must . . . depend on the prior branches of philosophy—on phenomenology, normative science, and ontology as it arises from logic" (p. 154) one wonders why he chose to deal with it first. The entire second part of the book seems less rewarding by way of insight than the first part. However, Mr. Thompson's own statement of the peculiar difficulties of Peircian scholarship indicates that he is well aware of the problems that are involved when any one scheme of exposition is selected against any other possible alternative.

The book is nicely bound and printed—somewhat misleadingly so, since it is not so huge as it might appear to the student already exhausted from reading Peirce. This is occasioned not only by the large clear type (all to the good) but also by the less fortunate feature of putting thirty pages of notes at the end. Sone of these notes seem unnecessary and others could have nicely been incorporated into the text proper.

D. G. Brown

La Preuve Réelle de Dieu. By J. Defever, S.J. Paris: Desclée de Brouwer, 1953.

In *Cahier* V of his monumental *Point de Départ de la Métaphysique* J. Maréchal, a Belgian Jesuit, attempted to show how one might take up the critical problem from a Kantian starting point, and yet, by reflection on the nature and function of assertion, arrive at an ontology. In the *Preuve Réelle* an exponent of Maréchal's doctrines claims to establish, by means of critical reflection in the style recommended by the Vth *Cahier*, the tenability of the traditional *a posteriori* proofs of the existence of God. '*Réelle*' figures in the title of the work as an index of the author's concern to dispose of Kant's contention that such proofs involve an at least implicit resort to the abstractions of the Ontological Argument. To such a pitch is this anti-abstractionism carried, that a profuse existentialist vocabulary is mingled with the Thomist-Kantian one which issues from Maréchal. It is in the 'primary metaphysical experience'—a knowledge of sense-

objects—that the ontological dependence of the assertion of such knowledge is discerned. From this follow such precisions of the Principle of Causality as the author judges necessary for the proper formulation of the proofs. Much of what is said is of great interest as a criticism of certain Kantian and post-Kantian positions, and some may regret that only such elements as are required for the continuation of the book's argument at later points are discovered to be inherent in the assertion, for apparently elements of this kind can be unveiled with comparative ease and detailed certitude; (*la seule explication possible . . .* is a typical qualification). Such is the ease and certitude, in fact, that even readers who sympathise with the notions of metaphysical psychology must surely feel that at times this process of 'discovery' works much too neatly for it to remain above suspicion. Nevertheless, it is noteworthy that many of the themes accord in their conclusions with those of various recent, and more sober, British publications on the same subject.

In the present case, the success of the task undertaken—the proof of the existence of God—turns in the main upon the cogency of Maréchal's position as a whole, and this is itself the topic of much controversy among Thomists. In addition, those who have attempted to grapple with the complexities of *Cahier* V will understand the impossibility of forming a precise judgment on its doctrines. There can, however, be no doubt as to the great value of Defever's book as a compact guide to that *Cahier*: profuse footnotes and several well-documented appendices are devoted to the defence and clarification of the master's doctrines.

D. P. HENRY

Diderot and Descartes: A Study of Scientific Naturalism in the Enlightenment. By ARAM VARTANIAN. Princeton University Press. (London: Geoffrey Cumberlege). Pp. 336. 40s.

THIS volume is further evidence of the persistence of American interest in what is called the History of Ideas. The author is a member of the French Department at Harvard, and his interests are, understandably, in French literature and thought. Nevertheless he has, ambitiously, united several themes.

The first is concerned with the history of an "Idea": that of "matter and its inherent modes of behaviour as having brought about all things, or that all things are to be explained by recourse to matter and its properties", in its development from Descartes to Diderot.

The second is historical in a different sense: that of Cartesian physics as in fact the primary source of the materialist science of Diderot and his contemporaries. This is a counter thesis to the opinion that Bacon, Locke and Newton were the source.

The third, not specified like the others, is the reinterpretation of Diderot, showing both his importance and his consistency; while a fourth, which develops by necessity from the procedure adopted, and distorts each of the others, is the development of beast-machine into man-machine. This development is itself obscured by Vartanian's failure to make clear, and I think even to realise, that the culmination of this is the machine's becoming a *man, i.e.* in the establishment of biology and other sciences of man as needing no foundation either in physics or in theology.

The first tends to dominate the book, and results in loose and general discussion in terms of materialism, vitalism, mechanism, "finalism",

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transformism, preformism, naturalism . . . discussion which is repetitive and uncritical. A central problem for the serious student of Descartes is just how the mechanism of particles is related to the *res extensa*, or to the mechanism of a physiology of organs, or to the mechanism of gross bodies in relation. Does Descartes believe (*a*) that there *is* a world of particles, or (*b*) that there *was* a world of particles, or (*c*) that familiar things exist and can be explained by treating them *as if* they were systems of particles? Unless we distinguish these positions, and recognise the problems they present, talk of "matter and its inherent motions" even in connexion with Descartes is a vague blur—and Vartanian goes so far as to mistranslate Diderot, who speaks of *things* with different structures and capacities to move themselves or capacities only to be moved by other things, as talking of "matter" with *its* structure and *its* inherent motions (p. 267). Since one view is that we are talking all the time about known things and observable features, and the other is that we are talking all the time about unknown things and unknown features, the difference is great.

The great value of historical studies is that they present the "forms of the Idea", and the "Idea" is then intelligible; but the lesson is that when we talk of the Idea without its forms we say nothing intelligible. When Vartanian presents the details of science which concerned the *philosophes* so much, and their discussions of such detail, the "forms" are clear and their presentation important. When he discusses the Idea, or the "isms" which are themselves "Ideas" and are only loosely forms of the Idea of "matter and motion", the opposite is true. Between the two modes of treatment, the second theme is mutilated. What lies outside a certain thread of internal connexion in the French literature is ignored, *e.g.* the import of experimental science, partly determined by Bacon (who influenced Descartes) but itself already a tradition that could resist Cartesian rationalism, partly Aristotelian (classificatory, investigatory, studying structure and environmental relation—the beast upon whose back the philosophy of the period in question rode); the development of mathematical physics (in spite of the deep interest of leading *philosophes* in this, and so in Newton); and the effects of other philosophers.

Leibniz is shockingly handled: on page 11 his influence is restricted to "certain of his scientific theories"; on page 152 it is admitted that the Cartesian idea of *un tout* came to the *philosophes* "in part" by way of Leibniz; on page 271 Diderot's dispute with Maupertuis is said to have "coincided, by and large, with La Mettrie's opposition to Leibniz' monads"; and surely no one can read the *Rêve de D'Alembert* without recognising Leibnizian doctrine at the core.

Between the two treatments, that of finding detailed internal connexion, which is too often a matter of finding mention of Descartes, and the general discussion of "isms", the remaining themes are obscured. In the final pages an attempt is made to contrast Helvetius and Diderot along the lines of giving "man" a completely "outer" characterisation and giving man a completely "inner" characterisation, a procedure which seems to recognise the Leibnizian character of the problem and to distort both theorists in a radical fashion. Helvetius seems like a Leibnizian who believes that monads reflect but have no history, and Diderot like a Leibnizian who believes that monads have a history but do not reflect.

But with these characterisations (mine in terms of Leibniz, Vartanian's in terms of what is "inside man" and what is "outside man") we approach the blur of generality which is without meaning. We hide the philosophical problems of the structure and relations of active things and

passive things in a world, and of the relation between various sciences concerned with them, problems with which Helvetius and Diderot strove. Doing metaphysics is one thing; talking about metaphysics is another. Vartanian's presentation of detail helps to illuminate the first point, and shows us what we can expect historical studies to do for us; it also helps to show what is wrong with much of the book, as well as with many philosophical attitudes to metaphysics.

A. M. RITCHIE

The Meaning of Existence. By DOM MARK PONTIFEX and DOM ILLTYD TRETHOWAN. London, 1953, Longmans, Green and Co. Pp. x + 179. 12s. 6d.

THIS little book is an examination of the problem of demonstrating the existence of God, prompted by a dissatisfaction with the writings of neo-Thomists. It is surprising that the question whether these writings constitute a correct exegesis of the work of Aquinas is never canvassed; but at least the authors do not take the usual neo-scholastic view that their task consists in the mere annotation of a long-established system known to contain the main substance of philosophical truth.

The book makes the assumption, common to all neo-scholastic writing, that something can be made in philosophy of the notion of *being* as something that belongs to everything. This is an implausible assumption, not to be found in either Aristotle or Aquinas, which the present book serves only to render more implausible. Indeed, the use made of it here is more ambitious than usual: it is supposed that a demonstration of the existence of God can be pulled directly out of it.

The argument, stated by Dom Mark Pontifex, is as follows. The word "existence" has a certain meaning, which is indispensable for thought; for to say that any statement whatever is true is to say that something exists (to say that this flower is red is to say that this red flower exists). Existence cannot be analysed away: it is true that "cats exist" means "something is a cat"; but then by "something" here we mean "something that exists". Now there is a mental act which occurs whenever we make a statement, and also in perception, namely, the act of assertion: but the "state of mind . . . which we describe as assertion" must "imply some corresponding characteristic in the object", since it is the object which determines whether what we assert is true or false. Hence when we are aware of anything, we are aware of it as having this characteristic—"assertibility or existence". Existence is common to everything; but it is a Thomist error to suppose that it is some *one* element in each thing, for every element exists. We therefore have to conclude that there is some one thing to which everything which exists stands in some one relation, its standing in this relation to this thing constituting its existence. This one thing must be (exist), but it cannot be anything in particular. It is God.

Dom Mark Pontifex could complain that this summary misrepresents him: this possibility derives from his subsequently contradicting, rather than qualifying, his original statements. The looseness of the terminology is remarkable: "existence" is said to refer to a common aspect or element in each object, and on the same page (12) to be incapable of referring to a common aspect, and on page 17 to have been proved not to refer to a common element; it is also said to "refer to an object as true". God

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"plainly" has being (p. 23), but he cannot be said "with full logical consistence" to exist (p. 49).

Dom Illtyd Trethowan endorses this thesis, and makes various marginal comments. The chief of these is that someone might try to evade Dom Mark Pontifex's argument by saying that all that was in common to all the things that exist is that they are objects of our experience. This view, he says, is not strictly refutable: hence the argument in question is not which must be accepted on pain of self-contradiction. Acceptance of the argument depends on seeing that there are two senses of "exists": one in which a thing is said to exist if it is merely an object of my experience, but also another in which the object is asserted to exist in itself, and to have a value in itself. Dom Illtyd Trethowan thinks that one cannot prove that things exist in the latter sense, and indeed that the majority of ordinary people nowadays do not believe it; but that one ought to believe it, and that if one believes it, Dom Mark Pontifex's argument for the existence of God then follows. The distinction is presumably a weak attempt to characterise idealism and realism: what connexion it is supposed to have with Dom Illtyd Trethowan's other thesis—which is presented as though its meaning were patent—that we know things as substances (or rather: 'things' as 'substances'), but only because we are ourselves substances, I have been unable to determine.

Dom Illtyd Trethowan is concerned to show that the view which he and his collaborator are putting forward is not Ontologism (the view of Rosmini-Serbati): he argues that his recognition of the logical possibility of idealism constitutes a rebuttal of this charge. This defence, which involves saying that the idealist is content with knowing things, whereas Dom Illtyd Trethowan claims to know things as true, is unconvincing. Even if it succeeds in distinguishing between the views of Rosmini and those of the writers about the *knowledge* of God, their view of God's *existence* still seems to coincide with the opinion that "the *being* of which man has intuition is necessarily something *of* a necessary and eternal being who is the creative . . . cause of all contingent beings: and this is God".[1]

The authors say in their preface, reasonably enough, that it is better not to spend time arguing that metaphysics is possible, but actually to do some: the present book is their effort in this direction. It is unlikely to convince anyone that what they give the name "metaphysics" to is unjustifiably neglected. If there is one thing which has become absolutely clear in philosophy, it is what Frege expressed by saying that a statement of existence does not take the form of saying something about an object; and to write about existence without taking this as a starting point is to invite catastrophe. The isolation of neo-scholasticism from the rest of philosophy has for a long time resulted in its appearing more than merely old-fashioned.

M. E. DUMMETT

Nascita Del Mondo Moderno and *Concetto E Problemi Della Storia Della Filosofia*. By FRANCO LOMBARDI, Professor of the History of Philosophy at the University of Rome. Casa Editrice Arethusa, 1953. Pp. 332. L. 2300, and Pp. 88. L. 800.

THE first of these two books, which deals with the Birth of the Modern World and is supplemented by the second, a brief essay on the Concept

[1] For Rosmini's views, see MIND, vol. XIII O.S., 1888, p. 662.

and Problems of the History of Philosophy, is a work of prime importance. How relevant it is to the burning topics of the day can be realised from the author's analysis showing that, just because we are not clear about our operative concepts and values (*e.g.* "progress", "modern", "liberty", "European", "civilisation"), we (the West and America), who are the real progressives, are made, by the double-think and double-talk of Communism, to play the part of reactionaries, while Russia, the arch-reactionary of our day, poses as the champion of progress.

Whatever may be the case with the birth of the modern world, the birth of modern philosophy, it would appear from Professor Lombardi's showing, has not yet taken place. For all so-called "modern philosophy" is anachronistic. It has not yet freed itself from the Greek, in particular the Platonic-Aristotelian, fallacy of an absolute, hyper-uranian or theological Truth (truth such as a God might have and which cannot but be true) perfectly adequate to an eternal reality of Ideas or Forms and independent of the vicissitudes and vagaries of human thinking; a fallacy to be traced ultimately to religious (and Oriental) influence and begetting the antitheses (from which also we are not completely free) between conception and sensation, between interpretation or construction and the *datum* or the immediate, between spirit or mind and matter or the body. It is due partly to fear of freedom. Kant did, indeed, lay the foundations for a modern philosophy, one which will give the lineaments of a human truth belonging to human thinking. But because he had not exorcised the notion of this superior truth, he got himself bogged down in the antithesis between *a priori* and *a posteriori* and he made of human thinking and its truth a screen between the thinker and the "thing-in-itself". It was easy for his successors to show that the latter did not exist and that there was only this hyper-uranian truth belonging to a hyper-uranian, or universal, or rational Subject, Mind, Thought or Idea, identical with reality but not the thought of anyone in particular. Thus was established Hegelian Idealism, and philosophy thereafter became a fantastic gnoseological-metaphysical cosmogony evolving the individual from the universal, becoming from being, experience from thought, the Kingdom of Prussia from the Kingdom of Heaven; or it was sterilised by being identified with the Theory of Knowledge or paraded in the romantic rags of pseudo-historicism. Characteristically Italian in this, Professor Lombardi reserves the best of his truly Roman satire for what is Italian—the neo-Hegelianism of Croce and Gentile. Such as it was, this speculation, he holds, confirmed, if it did not cause, Italy's economic, social and political backwardness. But the post-Hegelian philosophy which flourished, or is still flourishing, outside Italy, is only "the rebellion of the slaves" or the reaction against their father of "the ungrateful sons of Hegel". It all suffers from not seeing clearly that denying the existence of a truth independent of our human thinking does *not* involve denying the existence of an object independent of that thinking, and from not being convinced that our truth really is truth. For really modern philosophy, which is only just now coming to birth, there is no universal, rational, *a priori*, purely theoretic thought, no thought in itself at all, but only thinking men. Their thinking is inseparable from their talking and even from their breathing or digesting. It is rooted in a larger consciousness which is neither psychological nor logical but is identical with the sense of life itself and is that which those must have in view who champion the primacy of "intuition", of "the will", or "life", or "the unconscious" (perhaps also "the heart"?), over "the intellect".

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The possibility of truth for this thinking is guaranteed by its own power of self-criticism immanent in the ever-vigilant response to the independent object. (A truth, we may interpret the writer as meaning, is a truth so long as it is open to correction, and we truly know so long as we also know, Socratically, that we do not know.) There are no concepts or interpretations or constructions over against immediate experience or *data* to which they are either prior or from which they are derived: even such a response to the object as is the apprehension of a flash of light is already a construction or interpretation. Nor is thought the activity of a mind working with or within a body but of the responding, organising individual, like and parallel to his breathing, eating, digesting, etc. Like all life, it is crisis (*κρίσις, i.e.* both decision and judgment) and freedom, but a weighted freedom (*libertà pesante*). That is the freedom for modern man.

Only of such thought can there be real history. The history of thought is only a minor part of the history of man, and the history of philosophy is the history of the thought about thought.

The story of the birth of the modern world is an episode of this larger history, or at least of European civilisation. The latter, beginning with Athens, has been up to our own times the civilisation of a society with some sort of class distinctions; hence the theological-metaphysical philosophy of a kind of bi-cameral universe with an Upper and a Lower House suited it. This civilisation is now coming to an end along with this kind of society; it has certainly lost its role as the world civilisation. But this need not mean the end of all civilisation, as some people, those who cling merely to *their* liberties, *their* privileges, think it does. European civilisation will be transformed, and its role will be taken over, by a new world civilisation determined by the mass democracy of America and Russia and by the totalitarianism which is henceforth inevitable at least in the economic sphere and the administration of the Welfare State. But into this new civilisation can be planted the values which have been elaborated since the time of Greece: these are all different forms of that critical freedom one form of which, human as contrasted with hyper-uranian thinking, has already been considered.

No summary can give an idea of all that is said about the part played in the elaboration, refinement, complication or sometimes, retardation of these values by Greece and Rome, by Christianity, Catholicism, the Middle Ages, the Renaissance and Reformation, the development of the scientific spirit, the Industrial Revolution, Romanticism, Liberalism, Socialism, England and America; about the nature, causes and effects of Fascism, Nazism and Communism, and about the immediate situation. Instead of attempting the impossible, I will offer a criticism which is worth making both because it accords with the author's own truest thinking and feeling somewhat distorted in this book by a certain polemical spirit (that of anti-clericalism ?), and because it poses *the* problem of our times. He hopes (p. 296) that "the right education of a more carefree humanity, more free from the anxieties begotten by material needs and a repressive schooling will alleviate its need and anxiety for salvation", as though it could not be shown that precisely this kind of education can, if anything, sharpen the feeling of the need for salvation, and as though there were any other cause for that feeling except the need for salvation itself, or any other way of appeasing it except to offer it the right kind of salvation! Nor does he, like some people here, explain metaphysics by saying that their authors are the innocent dupes of language. Nevertheless, he is

under the delusion of all logicians, that when they have exposed a fallacy in a way of thinking they have thereby exposed the root of that thinking. This is like imagining that when you have shown the lover's illusions about the beloved you have thereby shown the source of his love! After all, whatever we may think of religion and of metaphysics, they are all attempts to provide an armature for a faith in *values*, without which mankind cannot live. Thus, it is, surely, the problems of axiology, scarcely touched upon in this book, more than those of gnoseology which led, and still lead, to Platonic metaphysics. Now, Professor Lombardi repeatedly laments that the present crisis is a crisis of faith, faith in humanity, faith in the values of the modern world, "the values of our fathers". But how is contemporary man to protect this faith without any armature, not even his fathers' belief in the idea of evolutionary progress, a belief which has now been irretrievably shattered by the facts of two world wars? How is he to keep any faith at all with "a philosophy of the universe" which makes him out to be merely an insignificant part of a meaningless "universe"? His faith in these circumstances must be that if a thing is worth doing or being at all, then it is worth doing or being even in such a "universe". But in such a faith a kind of transcendence is already implicit, the transcendence of worth-whileness. Or if it is not, then some philosophy is needed to show that such a faith is not quite the nonsense simple-minded people think it to be. It may be possible for the antithesis between religion and humanism to be overcome like the many antitheses failure to overcome which earns from Professor Lombardi the title of "rebellious slaves" for so-called "modern philosophers". But, surely, the same title is deserved by those who, as he seems to do here himself, instead of overcoming that antithesis, take up their position, "modernly" enough, on the second side of it, humanism. They are the slaves of religion rebelling against religion, and slaves cannot give freedom even if they all had that which they certainly have not all got, the fine courage and broad humanity of Professor Lombardi which make of this book such a positive and inspiring contribution to the thought of our day.

PHILIP LEON

Philosophical Essays. By P. R. DAMLE. Asia Publishing House, Bombay. Pp. x + 207. Rs. 9/12.

PROFESSOR DAMLE is Professor of Philosophy at Nowrosji Wadia College, Poona. He has gathered together in this book a couple of dozen papers originally presented to a variety of audiences—from philosophical congresses to the Officers' Club, Kirkee.

Most of the papers are on fairly standard philosophical topics, or what in this country were fairly standard philosophical topics a generation or so ago. ('Quantity and Quality', 'Fact and Value', 'Reality and Appearance' 'Souls: One or Many?', 'Emergent Evolution' . . ..) And Professor Damle's treatment of these standard topics follows on the whole a standard pattern; *viz.* there is much to be said for both sides and the truth lies in a combination of opposing views. Thus: things have both a quantitative and a qualitative 'aspect'; fact and value have each both a subjective and an objective 'aspect'; the true view

of evolution is one which combines both the mechanistic and the teleological 'aspects'; and so on.

Of more interest are the last three papers, which are on Indian philosophy. The Western reader will have sympathy with Professor Damle's appeal to Indian philosophers to concern themselves less with Idealism and to devote more time to the development of the other trends in their complex philosophical tradition. He has some wise things to say about the common, and facile, view that the merit (or demerit, depending on how you look at it—but anyway, the distinguishing feature) of Indian philosophy is its stress on the supra-rational, on intuition, on something-beyond-logic. And his comments on the tendency of both Westerners and Indians to interpret native Indian writings too much as variations on European philosophical themes are eminently sensible.

THOMAS MCPHERSON

Right and Wrong. By AFRICAN SPIR. Translated by A. F. FALCONER, B.Litt., M.A. With an introduction by Sir David Russell. St. Andrews University Publications. Oliver & Boyd. Pp. 86. 10s. 6d.

AFRICAN SPIR was born in Russia in 1837. While still a young man he gave up a career in the Russian Navy in order to devote himself to philosophical studies. In these he set himself an ambitious programme. In *Right and Wrong* which was first published in 1879, he tells us that philosophy must "exhibit the nature of man in its true light" and "make plain the ultimate purpose of existence". It must also "set forth the supreme principles of justice". The book is an attempt to work out and give a metaphysical justification of Spir's belief in human equality, a belief to which he gave practical effect by liberating the serfs on the estate which he inherited.

He protests against relativist doctrines of "fluid truth" as a "negation of all law and order in the universe". But "since truth is the agreement of ideas with reality" and change is orderly—"the laws which govern all change . . . are themselves *immutable*"—"the fundamental nature of things is unchangeable". Having affirmed his belief in two worlds, Spir's argument hinges on a contrast between the "empirical nature of things" which is "abnormal, and rests on illusion" and "the real constitution of things". As it is the chief end of man "to free himself from abnormality of every kind" he must renounce egoism, which reflects his empiric nature, for the "higher norms" which "like the norms of logic . . . have their basis and origin in the unconditioned nature of things".

On this metaphysical prolegomenon is based Spir's vindication of an optimistic faith in progress and his discussion of such topics as "law", "justice", "equality", "capitalists and workers", "taxation", and so on.

Right and Wrong does not appear to be original, either in its conclusions or its argument, and does nothing to suggest that the author had found any answers to the many serious objections to this kind of approach which are too familiar to need repetition.

The book is presented in a very readable translation by A. F. Falconer.

E. GILMAN.

John Stuart Mill. By KARL BRITTON. Penguin Books, 1953. Pp. 224. 2s.

MILL makes a difficult subject for a brief introduction. This Pelican is a notable feat of compression. With no undue simplification, and only occasional loss of clarity, Mill's views are concisely stated and his arguments neatly dissected. The book opens with a biographical sketch, followed by an interesting discussion of Mill's ethical and political opinions. Some criticisms are made here, which are not easy to interpret: for instance, the charge that Mill lacked a faith 'that could determine that institutions shall be real and have positive moral value in themselves'. The suggestion that Mill held a clockwork theory of institutions seems inconsistent with much that he says in his *Representative Government.* The discussion of Mill's logical innovations is well turned, though naturally the cramping effects of brevity are here most apparent. There is a final chapter on Mill's epistemology and his attitude towards religion.

R. J. SPILSBURY

Meaning, Communication and Value. By PAUL KECSKEMETI. University of Chicago Press, 1952. Pp. viii + 349. £3 4s.

THE purpose of this book is to overhaul the notion of meaning taken in a very general sense as a central concept in philosophy and an important one in some sciences, *e.g.* biology. There are three parts, of which the first contains a general account of meaning in this broad sense. The second section is restricted to discussions of linguistic topics including syntax and verification. The last section deals with value judgments and some issues arising out of philosophy, psychology and sociology.

The book is disjointed, often stylistically opaque, and the author has a tendency to define his position negatively by stating his disagreement with other philosophers. There are, however, occasional patches, varying in length from a sentence or two, to several pages, where what is said is lucid and interesting. A distinction between sign and symbol, a longish section on proper names and the status they confer, a chapter on motives, *norms* and values are among the better things in the book. The second and third sections would have done as well as a series of separate essays, since their relation to the more obscure first section is not clear enough. Although Mr. Kecskemeti implies that he has not achieved a finished system it is obvious that he thinks he has a system to expound. A close reading of the first section leaves the reader wondering whether the author has made clear to himself either the main principles or the details of his theory. There are a great many technical terms, some of them undefined; with a few exceptions there are no concrete illustrations, and those key passages which should contain the kernel of the theory seem wilfully ill-expressed, the more so when one finds them repeated nearly word for word.

'*The meaning of a sign S is that when S is present in a situation it determines one kind of response that is "good" in that situation*—"good" in terms of the possibility of attaining some satisfaction.'[1]

'The meaning of a declarative sentence is that it asserts a fact'. There are many other such remarks that make one suspect a misprint until one finds the same thing said again later. In trying to elucidate one section by reference to another it is difficult to avoid the conclusion that distinctions

[1] Author's own italics.

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and definitions proposed earlier have become forgotten. Thus on page 36 it is said that by 'sign' is meant not an external object, event or stimulus but a situational relationship whose terms include the needs of the organism. Two pages back 'situation' is said to mean a totality of responses by which an organism can achieve something, and on the preceding page signs are said to be present in situations.

In the exposition of the general theory Kecskemeti objects, no doubt rightly, to the simple identification of the meaning of something with the response it actually evokes. The meaning involves abstraction from a number of other factors including the situation in which the response occurred and the nature of the organism whose response it was. This is of course true though less impressive if turned the other way up, when it looks more like the truism that you cannot predict someone's response to a remark simply on the basis of knowing what the remark meant. The behaviourist exercise of looking at things upside-down, trying to describe meanings in terms of responses and other factors is a familiar one. What Kecskemeti seems to regard as his main contribution to this programme is the view that evaluative judgments are somehow involved in it, but in exactly what way is, as usual, never made clear.

O. P. Wood.

An Introduction to Philosophical Analysis. By John Hospers. Prentice Hall, Inc., New York, 1953. Pp. xii + 532.

This book is designed not merely as an introduction to the practice of philosophical analysis but as an introduction to philosophy in general; a more accurate, though for practical purposes excessively long, title would have been 'An introduction to philosophy from the standpoint of a philosophical analyst'. The author has sensibly avoided any attempt to cover the whole field of philosophy or to give a complete historical picture, preferring to devote his space to exhibiting selected problems of central importance as live issues; but he has plenty of space and in fact covers a very wide field embracing natural theology, ethics and aesthetics as well as the more obvious problems of language, knowledge, perception and free-will. A considerable number of exercises for the reader are appended to each chapter.

It will always be a matter of opinion whether it is better to introduce novices to philosophy by means of special texts or by putting into their hands such untechnical masterpieces as Berkeley's *Principles* and Plato's *Republic*. For those who prefer the former method this would be a good text to choose; Hospers is clear, sound and willing to present more than one point of view even when his own preferences are evident. But it would surely have been desirable to have given a more sympathetic explanation of the activities of the traditional metaphysicians; few of them would agree that they were trying to give an account of the unverifable facts about the non-empirical world, which Hospers continually suggests was their aim; and even if they were muddled it is a gross oversimplification to say with reference to idealism 'often people, perhaps without knowing what they are doing, will flaunt out their assertions as a new discovery about the universe, whereas in reality they are merely manipulating words and employing them in violation of common usage without informing their readers of the fact'. No metaphysician has merely done that.

J. O. Urmson.

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Lord Samuel will celebrate his 85th birthday in November. A Committee representative of British Jews has been formed under the chairmanship of Lord Cohen to mark the occasion by a public Dinner on November 8th at the Savoy Hotel and a tribute of the Anglo-Jewish community who hold him in honour and affection. Lord Samuel has expressed the wish that the tribute shall be devoted to a building of the Hebrew University of Jerusalem, either a wing of the Library of the University containing the collections of Philosophy and Politics, or a building for the Department of Philosophy.

Lord Samuel, who was High-Commissioner for Palestine when the Hebrew University was opened in 1925 by Lord Balfour, has been the President of the English Friends of the University since the foundation of the Society thirty years ago, and one of the Governors of the University. He has been devoted all his life to Philosophy, and has enriched English literature by books which bring to the understanding of the common man the fundamental ideas of Philosophy. With an ageless serenity he works continuously for the synthesis of Philosophy, Science and Religion. It is hoped that his philosophical friends will take part in the celebration of the birthday.

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